MASTER PLAN

Calgary Zoological Gardens & Natural History Park

Prepared for the

CALGARY ZOOLOGICAL SOCIETY

St. George's Island
Calgary, Alberta

By
Zooplan Associates, Inc.
October 4, 1975

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INTRODUCTION

A suggestion in 1911, that a zoological garden be established on the North side of St. George's Island, bore fruit seven years later with the establishment of a donated deer as the first animal resident of what is now the Calgary Zoological Gardens and Natural History Park.

Since that time the Zoo has continued to grow, acquiring an extensive collection of animals and building many facilities for their care and exhibition.

During the period of development of the Calgary Zoological Gardens man's ideas about the nature and purpose of the keeping of wild animals in captivity have changed radically. In addition to some functional obsolescence, age has taken its toll of some of the earlier structures. Considerable repair and replacement, as well as new and more modern approaches to exhibits, was indicated.

In response to the necessity and difficulty of the decisions required to chart the course of Zoo development over the next ten years or more, the Calgary Zoological Society undertook the preparation of this development Master Plan, with Zooplan Associates, Inc. as their professional consultants.

It is the intent of this document that it provide an orderly and systematic guide, for the Calgary Zoological Gardens and Natural History Park, into the mainstream of contemporary Zoos of the world.

NEED

The original menagerie concept, under which a collection of animals was maintained for the amusement of their owners, has broadened into the modern concept of the multi-function Zoological institution. There is rapidly increasing public interest in the interrelationships between man, animals, plants and the natural resources of our planet.

In order to fulfill their expected role today, Zoos have had to move on from their primarily recreational orientation into the additional areas of education, conservation and research.

Restructuring of exhibit concepts and techniques is necessary to meet that need. For the Zoo visitor to better understand the infinite variety of animal life, and how it became that way, exhibits are required which enable an animal to behave and interact with others in a natural way. For conservation of the world's dwindling wildlife, exhibits are needed which provide for both the physical and psychological well-being of the animals, so that they can reproduce themselves.

Fortunately, what is required to meet these increasing responsibilities of the Zoo enhances rather than diminishes the quality of the traditional recreational function of the Zoo. Man, particularly urban man, has an ever-increasing need to feel some relationship to plants, animals, and the rest of nature. The newer less-crowded, more naturalistic and open Zoo can immeasurably improve the quality of a day spent at the Zoo. That this is important to a great many people is evidenced by the enormous attendance at zoos, compared to sporting events and other activities. It is one of the few activities which can be shared by the entire family from grandparents to grandchildren.

The rising concern over the state of our physical environment has raised the level of need for educational functions in the Zoo to equal, in public appeal, that of recreation. A properly designed, staffed and operated Zoo can be an important educational adjunct to the community school system at all levels, as well as to interested individuals. It can be a living classroom for organized study, and with proper graphics and other explanatory material an absorbing and painless way for the individual zoo visitor to know more about what he is seeing.

Conservation is on everyone's mind today. Good zoos may be the last remaining hope for many of the world's endangered species. A few are alive today only in zoos. As natural habitats continue to be destroyed in the wild, populations of some other endangered animals thrive and increase in zoos. Repatriation from zoo to the wild is a possibility where natural habitats can be saved or renovated.

Research into animal behaviour and adaptation can have important consequences for better understanding of human life, as well as aid in the conservation effort.

OBJECTIVES

In Charette, on May 31 and June 1, 1975, the Charette Team formulated the following objectives to guide the development of the Master Plan. The objectives were further clarified and approved by the Executive Committee of the Calgary Zoological Society on June 2, 1975. Many society members, city officials and citizens gave their time, experience and valuable thoughts as imput to the Team The decisions as to what should be exhibited, and in what manner and relationships, were based on these objectives. The Master Plan is a graphic expression of these objectives and of the concept which follows.

SCOPE

Ten to fifteen million dollars in capital improvement costs over a ten year period (1975 dollars). Increase in operating costs should be restricted to 10% per year over the development period.

ENTRANCE

A single entrance is most desirable from an efficiency and control viewpoint. It was recognized that this may not be possible until access and parking is fully developed.

EMPHASIS

Because the Calgary Zoo is the only generalized zoo in southern Alberta, it should remain generalized and show a wide variety of species from around the world. Special emphasis should be placed, however, on exhibiting animals hardy in the Northern environment, both North American and exotic.

ALL-WEATHER ZOO

Because of the extreme climatic conditions of the Calgary region a core zoo should be developed on St. George's Island and the land north of the Island to Memorial Drive to miminize long walks in cold weather, and to provide a substantial zoo experience within more limited areas for extreme weather.

NON-PUBLIC FACILITIES

Should be located north of Memorial Drive so as not to use land needed for, or interfere with, the functions of the core Zoo.

BOTANICAL

Calgary citizens have a keen appreciation of green, growing things because of the long, cold winters. The zoo should strive to fulfill this need by use of a botanical emphasis throughout and a botanical education program.

ANIMAL GROUPS AND REPRESENTATIVE SPECIES

In order to achieve the objective of "generalized zoo" a comprehensive collection containing major animal groups shall be exhibited. Variety in the represented groups is more important than showing many species within a group.

QUALITY EXHIBITION AND EDUCATIONAL EXPERIENCE

Quality of zoo exhibits (both the animal's and viewer's requirements) and the educational impact on the viewer, is more important than an emphasis on the size of collection and the number of different species exhibited.

PHASING

The plan must be designed for logical phasing of development without undoing earlier phases or unnecessarily disturbing existing facilities that are still in use.

PRIORITIES

The removal of the barred exhibits containing cats and bears shall have a very high priority in the phasing plan.

DESIGN

The major emphasis in the design (including detailed design of buildings to follow) shall be toward animals, not architecture. The zoo is an exhibition of animals, not buildings, and a neutral "non-architecture" concept is desired.

DINOSAUR PARK

The Natural History Park should be developed to attain its highest educational potential.

SERVICE AREA

The zoo shall be developed to serve citizens of Southern Alberta as well as the Calgary Metropolitan area. It is a regional zoo.

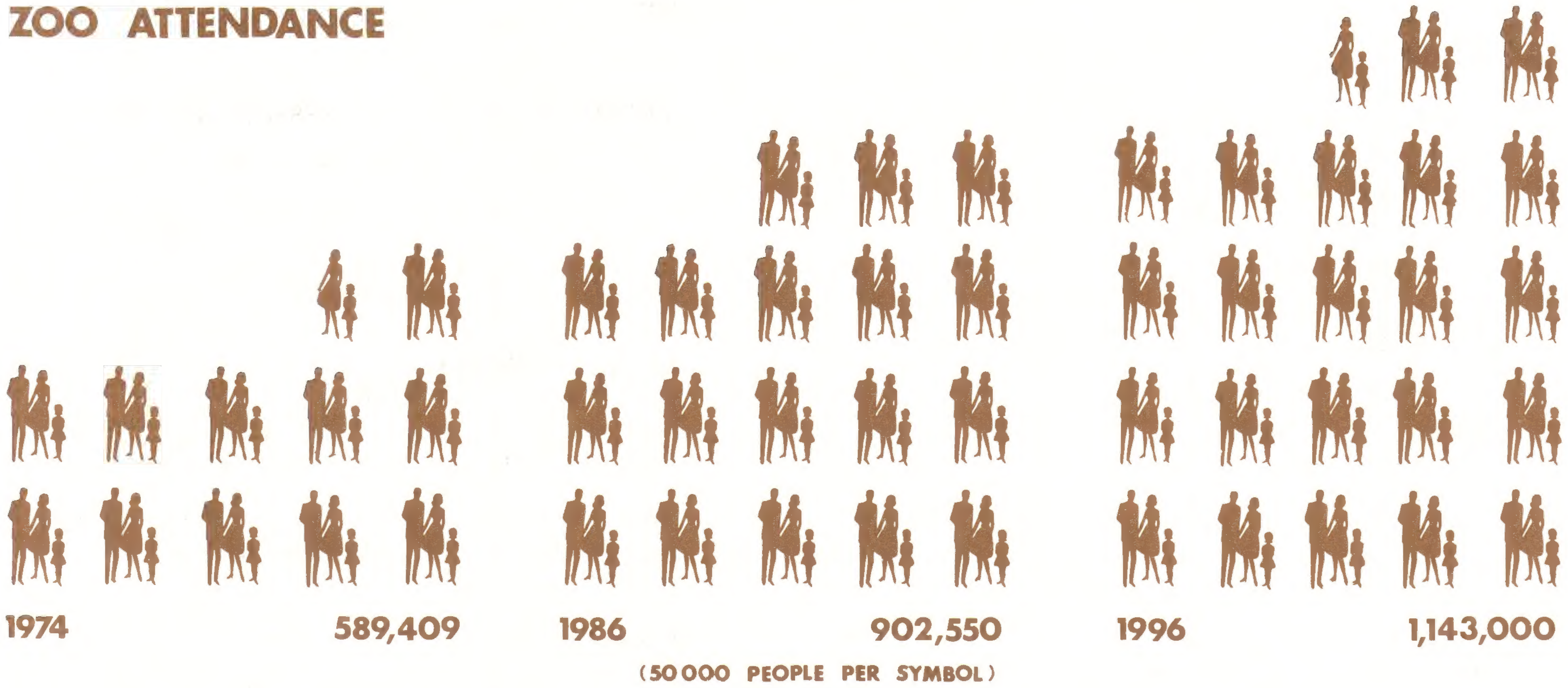
CONCEPT

The basic concept derived from the objectives, and the Calgary Zoo as it exists today, is to provide an all-weather, generalized zoo with a major emphasis on Northern Animals, stressing quality exhibition, education experience and botanical considerations.

In order to make use of valuable existing facilities, and to be realistic about housing and management of certain animal groups, no simplistic approach such as all "Zoogeographic" or "Habitat" is suitable. The plan therefore consists of Zoogeographic Exhibits, Habitat Exhibits, Taxonomic Exhibits and some specialized exhibits, applying each technique where it is most appropriate for conditions as they exist.

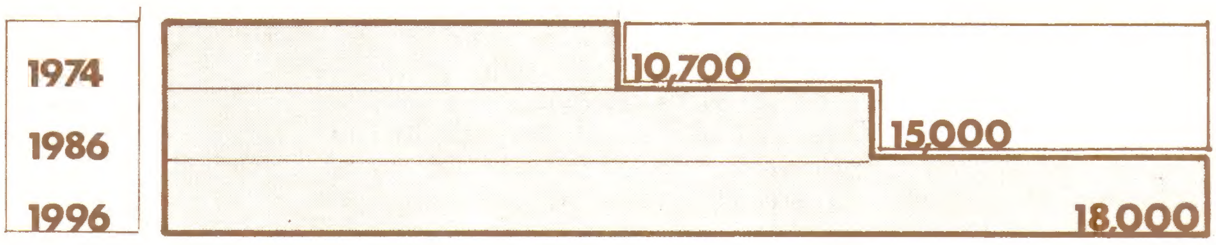
PROJECTIONS

ZOO ATTENDANCE

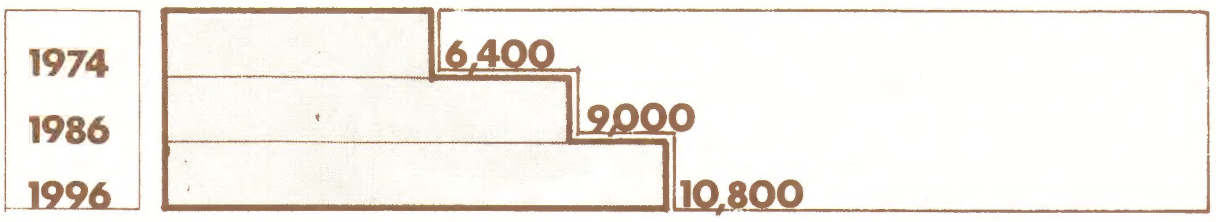


PEOPLE

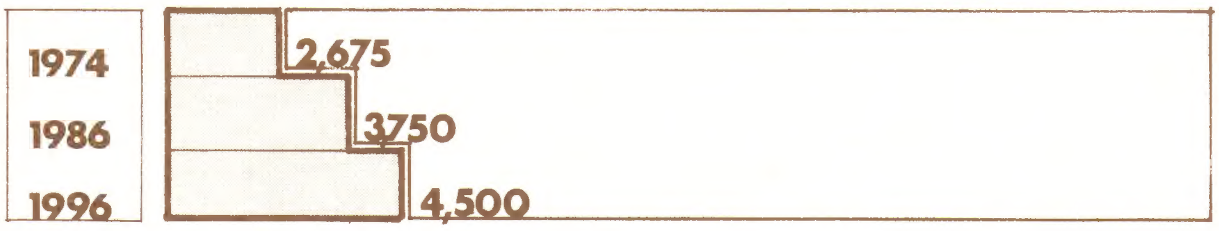
ESTIMATED PEAK DAY



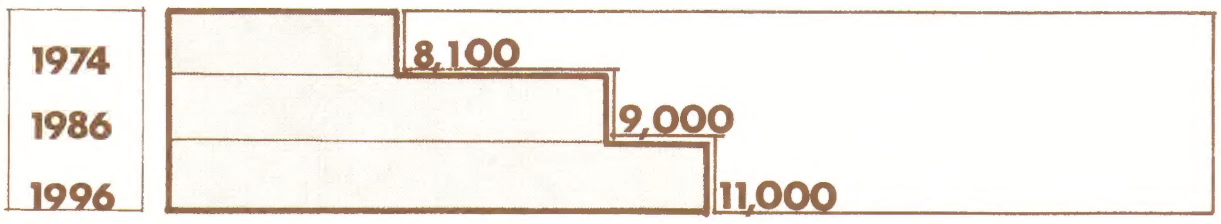
ESTIMATED PEAK HOUR



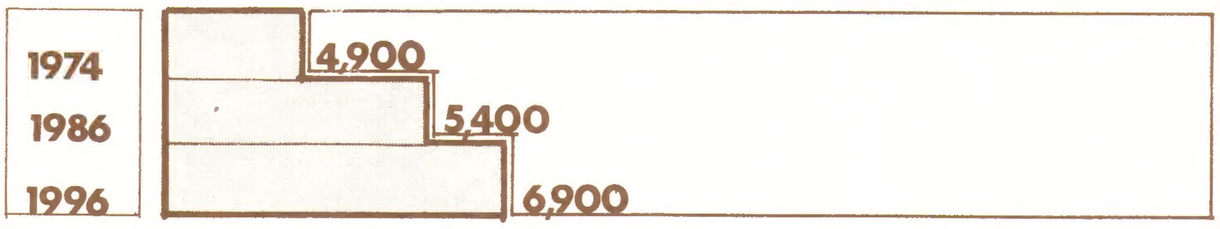
ESTIMATED MAXIMUM FLOW PEAK HOUR IN OUT



AVERAGE OF 15 BUSIEST DAYS ATTENDANCE



MAXIMUM IN ZOO AT ONE TIME- 15 BUSIEST DAYS AVERAGE

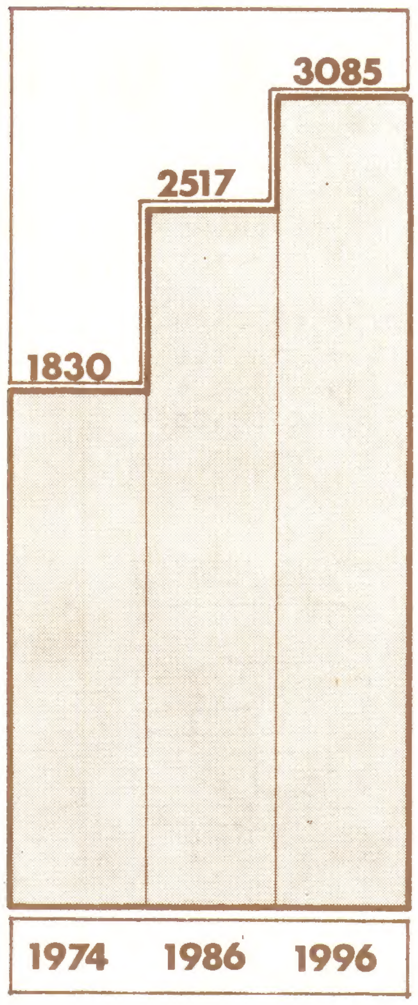


ATTENDANCE DESIGN CRITERIA

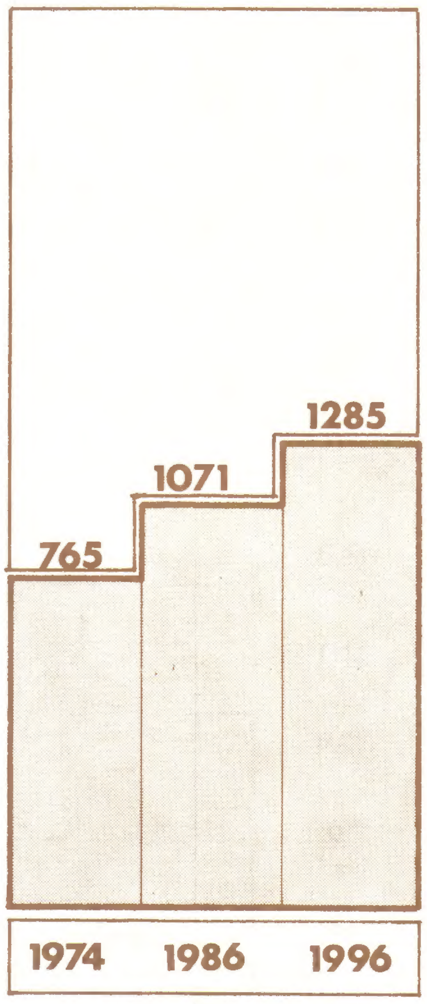
Other than in providing maximum space within the zoo for people, and peak flow rate in and out for cars, it is not economically feasible to size the elements of the zoo to comfortably serve the number of people who will attend during the peak hour, one time a year. It is more realistic to design for the average of the 15 peak days and accept the overcrowding which will occur a few days of the year.

Cars

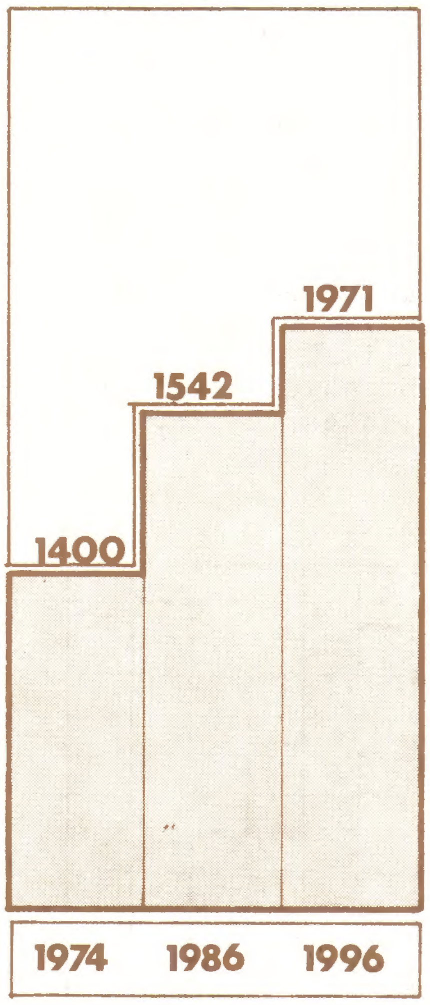
Parking is required at the ratio of one car per 3.5 persons. Paved parking provided for the average of the 15 busiest days. Overflow parking may be unpaved and at a much greater distance from the zoo.



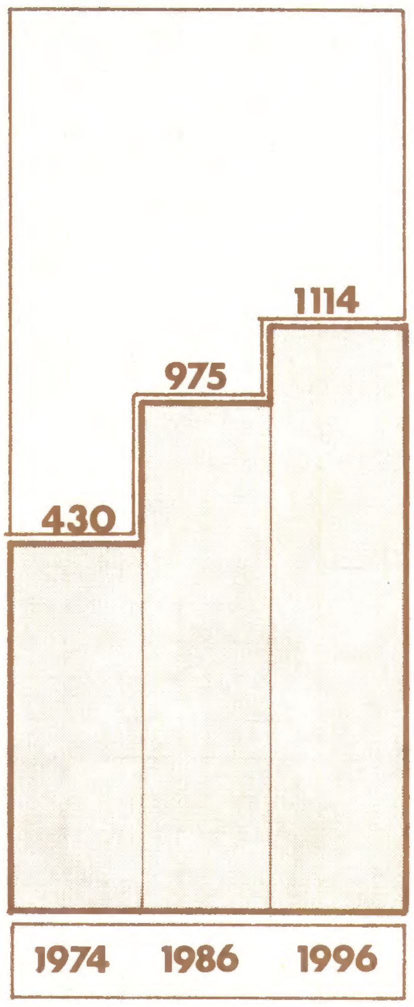
PEAK HOUR CARS PARKED



PEAK HOUR IN & OUT



15 BUSIEST DAYS AVERAGE CARS PARKED



ESTIMATED PEAK DAY DEMAND FOR OVERFLOW PARKING (ON GRASS, STREET, ECT.)

Busses

Bus parking needs, for school busses and other organized groups and tours, is estimated at 25 spaces. Arrangement provides for access and egress without backing of busses.

Bicycles and Motor Bikes

Parking space requirements for bicycles and motor bikes is estimated at 100. This requirement could increase with development of the city linear park system along the river, if they are permitted on the trails.

Seating

Seating must be provided for 1,040 persons or approximately 15% of the design load of visitors on the grounds at one time, divided between seating at food service areas and seating dispersed about the grounds which is oriented toward interesting natural features, animal exhibits or people watching.

Restrooms

Public toilet facilities, conveniently dispersed about the site, are provided either as separate structures or located within exhibit buildings. Total fixtures count should be a minimum as follows:

Men	Women
11 water closets	36 water closets
18 urinals	14 lavatories
14 lavatories	

No individual location should include less than two water closets, plus related fixtures.

WEATHER

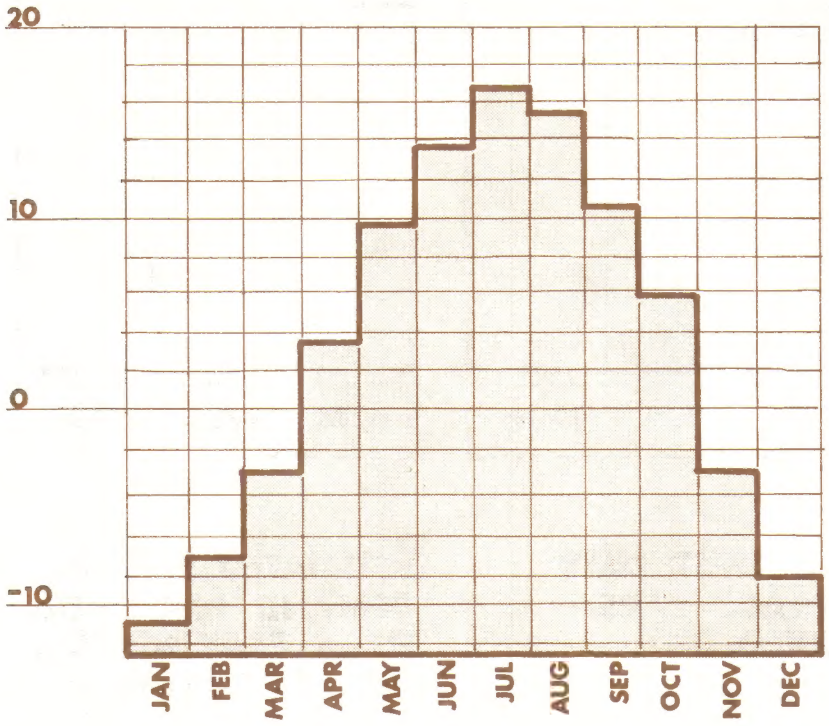
Calgary is situated 45 miles east of the Rockies. The climate is classed as "Cold Temperate", but due to the influence of "Chinook Winds" over the mountains, most winters are modified considerably. In winter the "Chinook" is the most striking feature of the weather in this region resulting in spectacular changes from bitter cold to extreme warmth. It is not unusual for the temperature to rise 17° in one hour, and a temperature range of 33° in one day has been recorded.

The normal winter mean is -8°, and low temperatures of -34° occur on an average of two days each winter. The severity of the winters has important implications for the design of the zoo, which has been recognized in the establishment of the objectives.

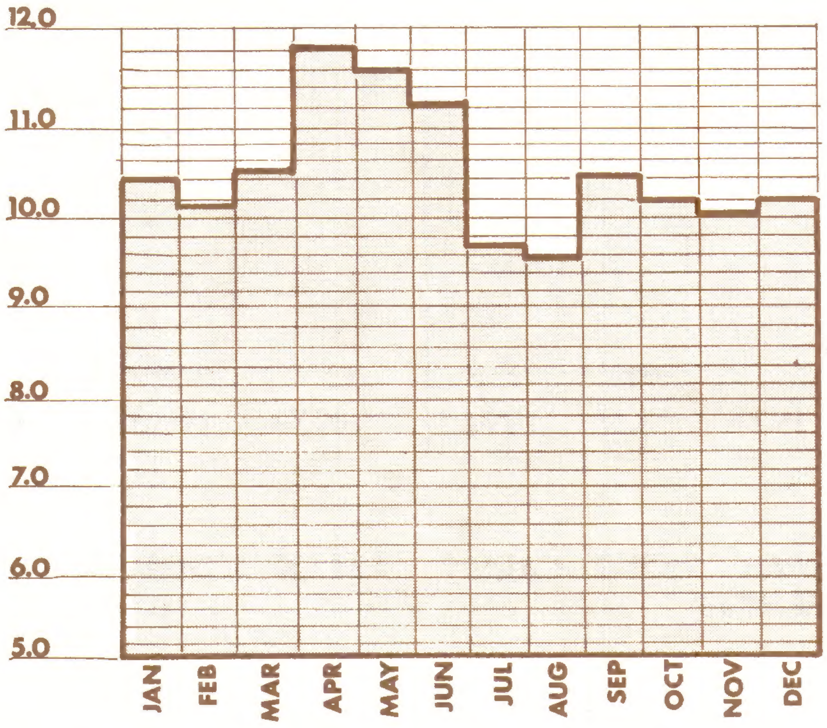
Summers are usually pleasant and cool compared to the hot, dry summers of the prairies to the East. Calgary's elevation of 3500 feet above mean sea level accounts for the cool summer nights. This same elevation is also responsible for a relatively short growing season, averaging 109 frost free days. This factor no doubt accounts for the popularity of the Conservatory, with its lush growth available throughout the year.

Rainfall is not heavy, averaging about 11 inches per year, with an additional 6 inches of precipitation derived from an annual 60 inches of snow. Most of the rainfall, however, occurs during the growing season, and will support outdoor vegetation at the zoo.

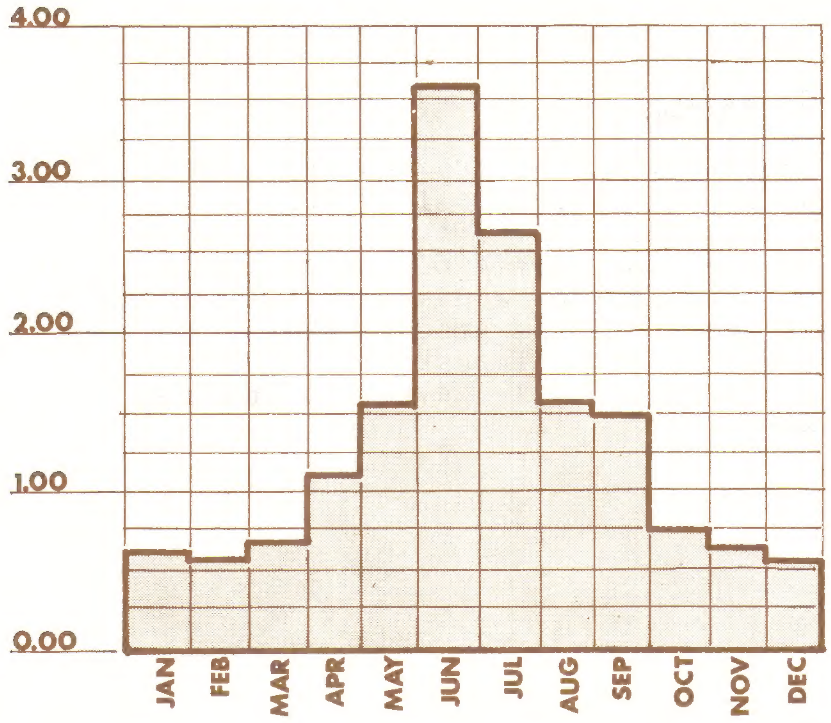
Calgary's average sunshine of 6 hours daily is one of the highest in the west, providing much time during which a visit to the zoo can be a pleasant outdoor experience.



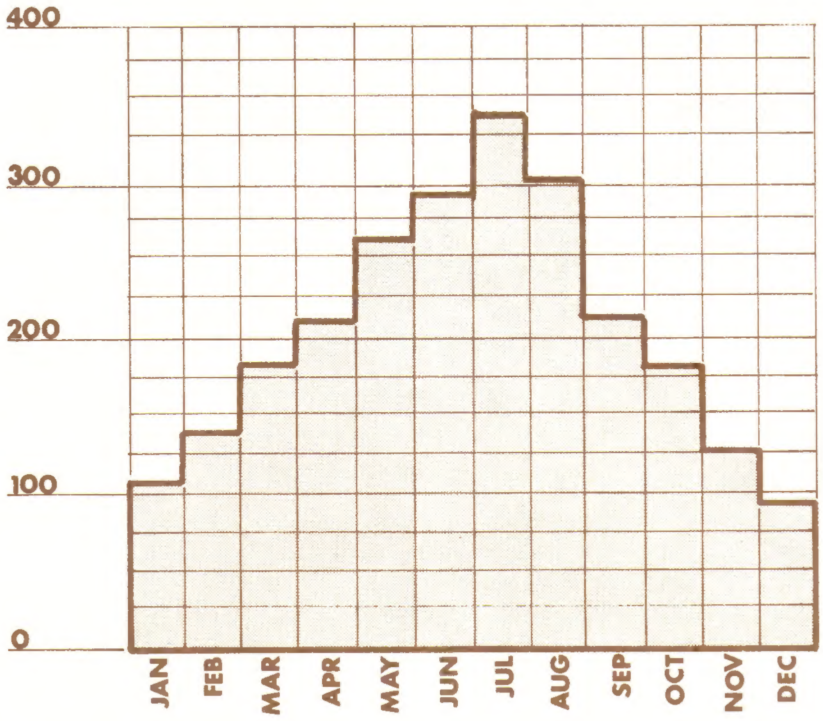
AVERAGE MONTHLY MEAN TEMPERATURE
(° CELSIUS)



AVERAGE MONTHLY WIND SPEED
(MILES PER HOUR)



AVERAGE MONTHLY PRECIPITATION
(INCHES)



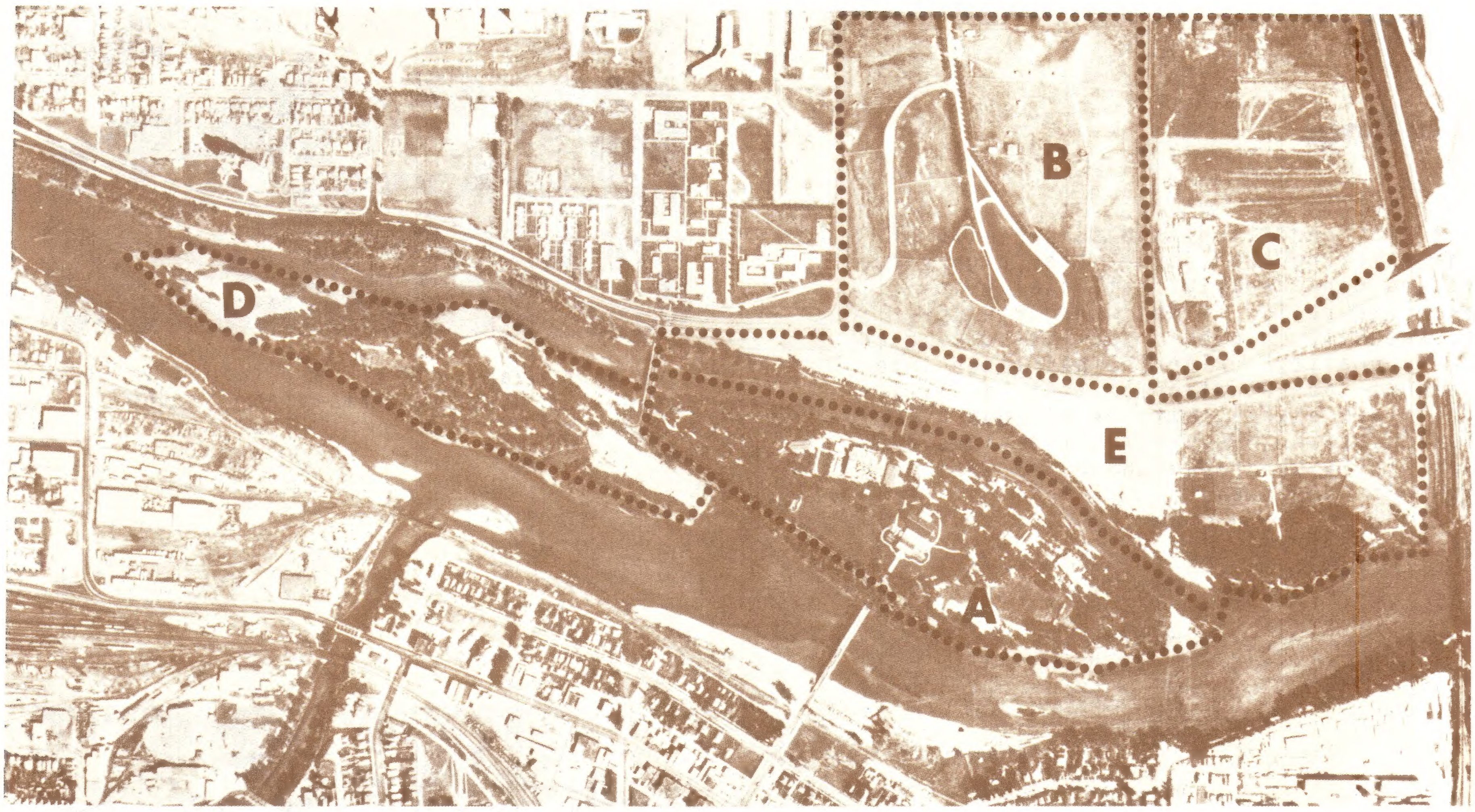
AVERAGE MONTHLY BRIGHT SUNSHINE
(HOURS)

VEGETATION

Established, mature trees and other vegetation exist on St. George's Island and along the river in the mainland area South of Memorial Drive. The remainder of the site is essentially barren and will need planting along with construction of the proposed new exhibits.

Since no major vegetation occurs in the area proposed for the Natural History Park, it will be possible to plant this area so as to simulate more closely the prehistoric habitat, than does the wooded area where they are now located.

TOPOGRAPHY



Existing zoo and available expansion area, as it existed prior to the Master Planning process.

The Calgary Zoological Gardens and Natural History Park is located approximately one mile east of the Central Business District, occupying two islands in the Bow River and adjacent mainland areas in various stages of development.

TRACT "A" (St. George's Island) is approximately 38 acres and now contains most of the Zoo's physical plant, and is the present location of the Natural History Park. With the removal from the island of the Natural History Park, playground, and service facilities, animal exhibits can be greatly expanded, while at the same time reducing the present overcrowded feeling of the existing animal exhibits. St. George's Island will become a major portion of the core Zoo.

TRACT "B" (the hill) contains about 58 acres with steep side slopes and automobile access to the top. Hoofed stock, sheep and goats presently kept in this area have little public appeal as they are not readily accessible to the Zoo visitor. The east slope of the hill will be utilized for surplus off-exhibit animals, and although they can be made available to the visitor, this area is not considered a part of the Core Zoo.

TRACT "C" (between the hill and Nose Creek) has about 47 acres and is now utilized only by the maintenance crew It is essentially flat land which was a former dump site on much of its area. Due to the elevation of Memorial Drive and Deerfoot Trail in this area, the use of this parcel as the new location for the Natural History Park will give this facility outstanding exposure to the passerby and should provide an excellent drawing card for the Zoo when fully developed. Location of the Zoo Service elements to the north of this tract allows access for outside vehicles separate from public circulation.

TRACT "D" (St. Patrick's Island) has not been used for expanded Zoo development because of flooding hazards. No animal exhibits other than the existing deer park are contemplated. It does complement the Zoo, however, by providing for picnic and play functions which free St. George's Island for its more intensive use for Zoo purposes.

TRACT "E" (River to Memorial Drive) consists of about 47 acres of land, presently used for parking and some hoofed animals paddocks from time to time which have been essentially off-exhibit due to lack of paved walks and visitor facilities. This area is to become a part of the core Zoo, as well as provide additional parking, administration and entrance facilities. Hazards related to the occasional flooding of lower river bank areas have been taken into account in the design.

EXISTING FACILITIES

Buildings

The age, condition, and suitability of the existing exhibits at the Calgary Zoo varies considerably from totally inadequate relics of the menagerie age to recently completed facilities of good basic quality. Planning has taken into account the retention of most facilities which are usable, with or without modification. Needed modifications are more fully described under the various exhibit complexes.

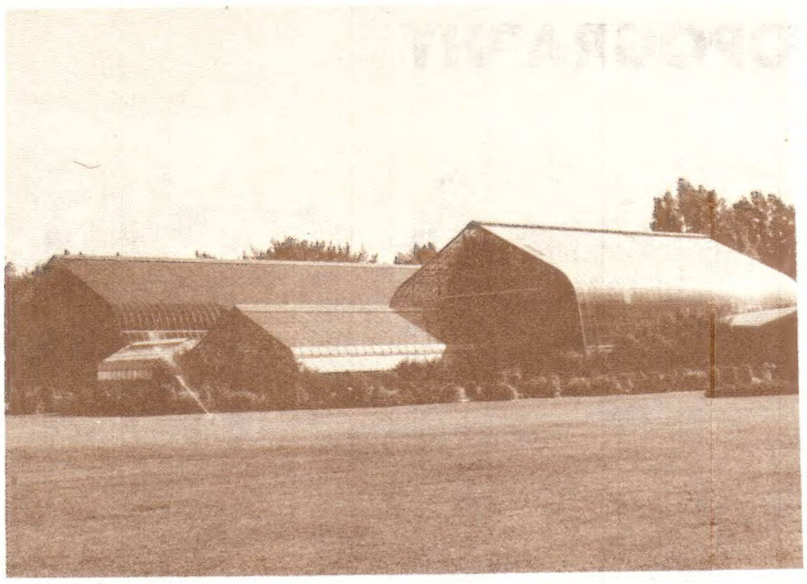
Animals

The Calgary Zoo has a fine collection of animals, which are well cared for and in good condition. The public is not completely aware of the extent of the collection, however, because of poor exhibit facilities for many species.

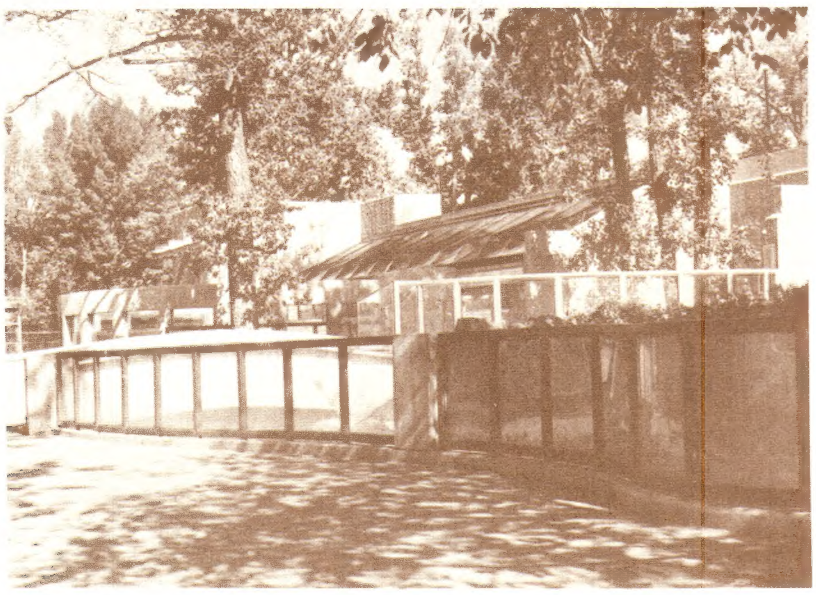
To further the modern concept of a Zoo as an educational institution, however, rather than as a "collection", modifications need to be made in order to show a broader and more meaningfull representation of animal life in sufficiently large groups to demonstrate behavioural characteristics.

Reduction will be made in the number of similar species shown such as bears, cats and primates, in order to be able to increase the variety in birds and to add African antelope, fish, invertebrates, and others.

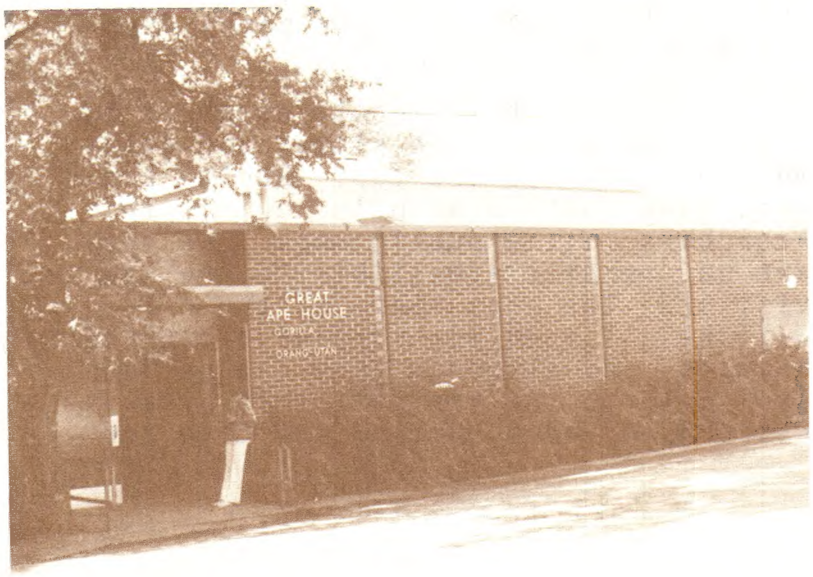
In selecting the species to be exhibited, care has been taken to make use of existing animal stock wherever this was consistent with the educational objectives.



The Conservatory will be retained intact, with only minor modifications in the interior.



The Polar Bear building will be retained with some rearrangement of species shown, and an addition. Existing otter and beaver outdoor exhibits will be reworked to provide a more natural habitat.



The Apes building will be retained with modification of the interior and replacement of outside cages with ground level yards.

The Nocturnal House will be modified to house primates and retained.

Obsolete cat and bear cages will be replaced.

The aging suspension footbridge will be removed. it's still there! (1989)

The Natural History Park will be relocated to permit its expansion, and use of the present area for an Eurasia complex.

This area between the river and Memorial Drive will be developed as the new North America Complex.

EXHIBIT COMPLEXES

Zoogeographic

North America

This complex will exhibit a broad range of animals native to and hardy in the Canadian environment, including hoofed stock, birds of prey, carnivores and small mammals. It is the largest of the exhibit complexes in terms of both area and species exhibited, which is in keeping with the Zoo's objectives to place major emphasis on Northern animals. Because of the animals adaptation to the climate, the majority of exhibits will be exterior exhibits, allowing a more nearly authentic representation of native habitats. Provisions are made for public comfort which will make this area useable in the winter months. (Page 34)

Eurasia

An area showing Eurasian carnivores, hoofed animals, waterfowl, and primates. Prominent locations are given to the Siberian Tigers and the Leopards as cold-climate and very popular animals which can be seen outdoors most of the year. A large colony of Japanese Macaque will be featured as an educational exhibit. (Page 24)

South America

This complex will show a range of animal types native to South America, in typical habitats. The location is sufficiently close to permit comparison to similar animals of Eurasia and Africa. (Page 26)

Africa

The Africa complex is an opportunity for the Calgary Zoo to provide adequate quarters for the large cats and to add African antelope to the collection, illustrating the predator/prey relationship. (Page 32)

Australia

A comprehensive Zoo would not be complete without display of the unusual forms of animal life native to this isolated continent. Since these animals are not hardy outdoors in the winter, this exhibit is closely related to the Vivarium and Nocturnal exhibits for the convenience of the Zoo visitor. (Page 29)

Taxonomic

Primates

A representative collection of primate species from around the world, including a comprehensive collection of the apes. (Page 22)

Pachyderms

This is always one of the Zoo visitors favorites, and is to be retained with minor aesthetic improvements. (Page 23)

Birds

An exhibition of five different types of birds from a variety of geographic regions, and in many of their species variations. Waterfowl are shown in the various geographical areas to which they are native. (Page 28)

Habitat

Semi-Aquatic

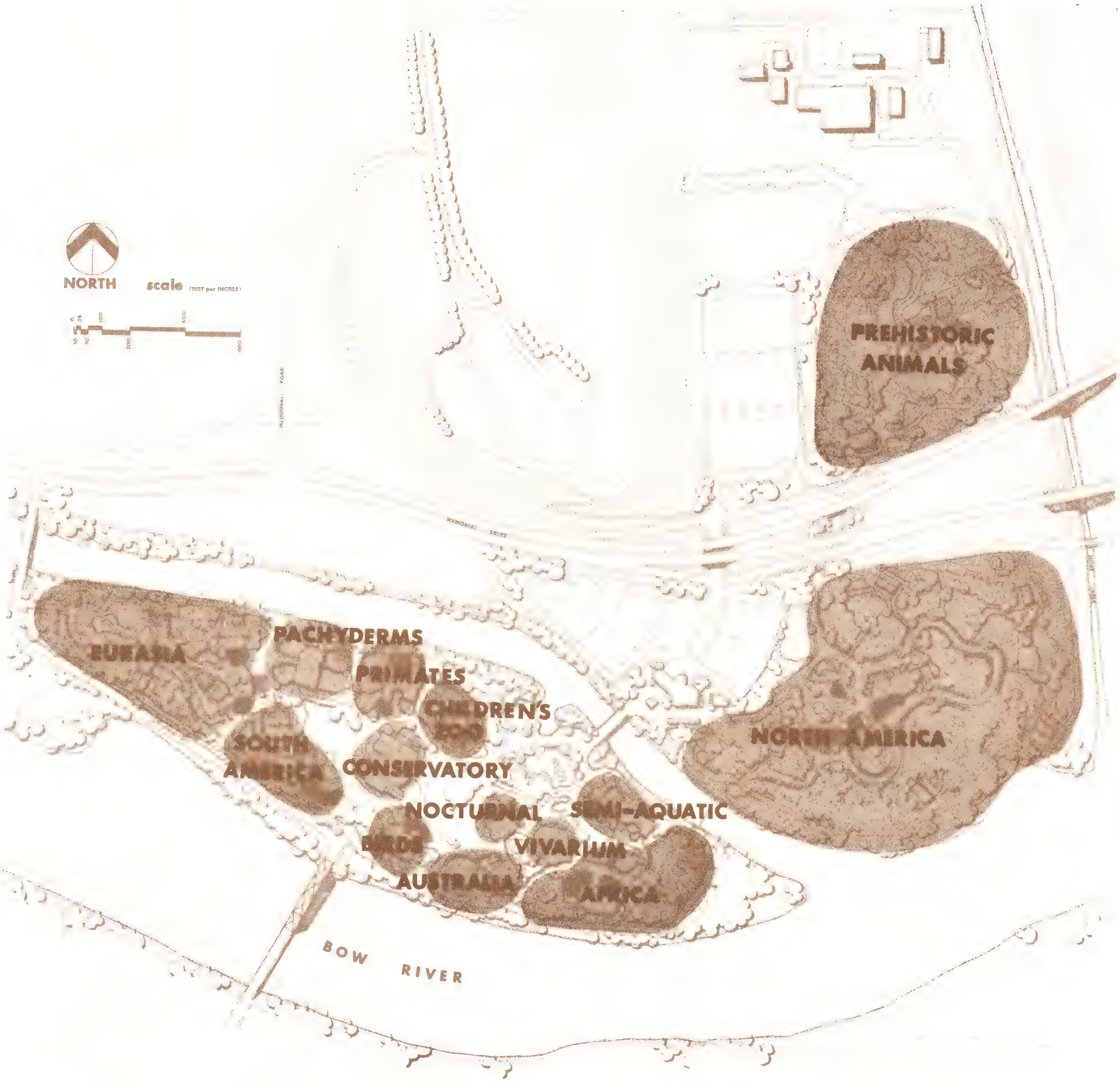
Exhibiting mammals and birds whose natural habitat is both in and out of the water, the existing facilities will show Northern species with an addition to house those from other climates. (Page 31)

Nocturnal

Reversing the day-night cycle in this building will permit the Zoo visitor to see these denizens of darkness in their active period. (Page 30)

Vivarium

Reptiles, amphibians, invertebrates and fish from various geographic regions. For the most part these will be species not formerly exhibited in the Calgary Zoo. (Page 30)



Special

Conservatory

A very popular existing botanical facility, which is to be retained. (Page 28)

Children's Zoo

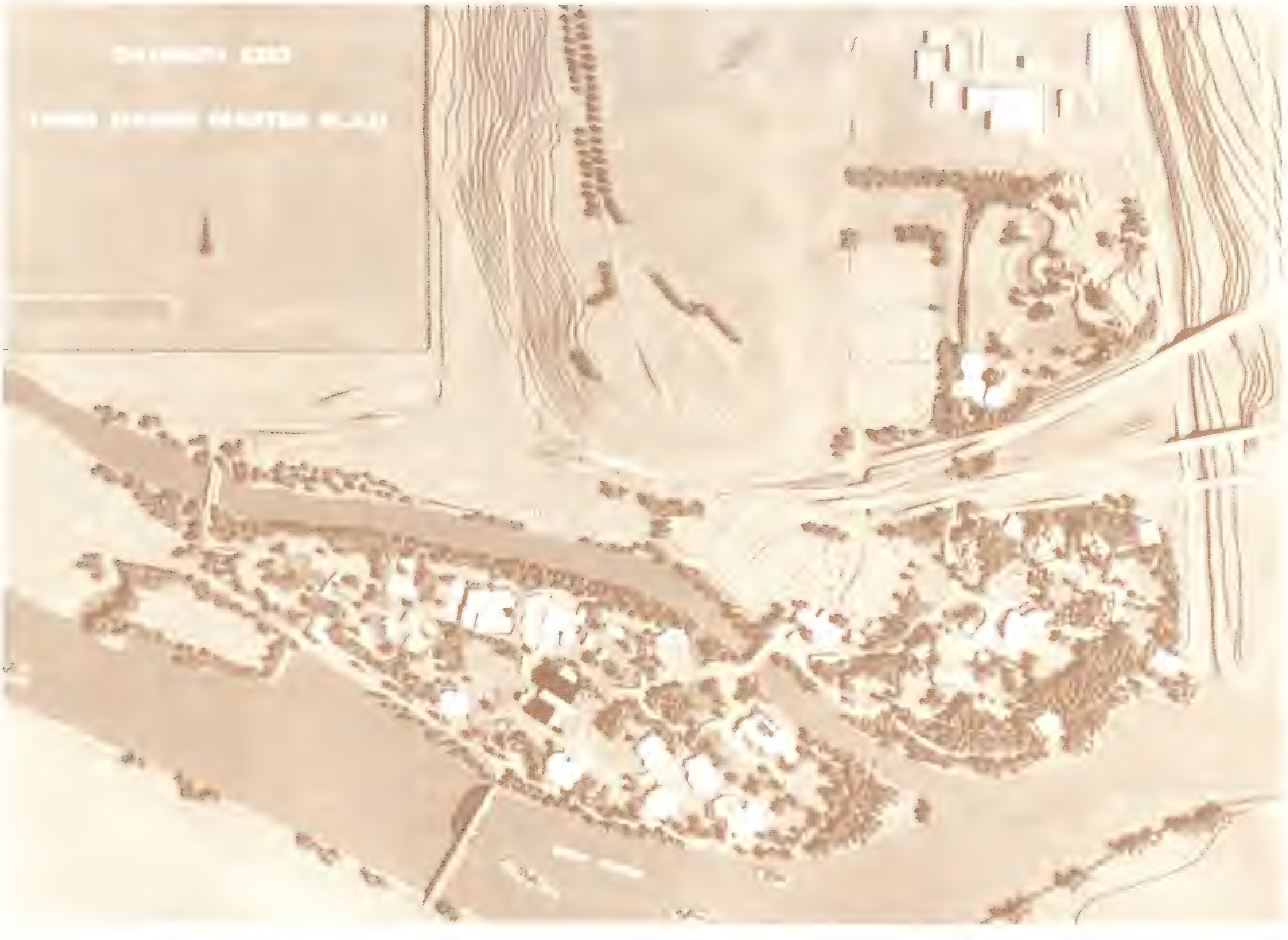
The recently completed Kinsman's Children's Zoo. (Page 22)

Prehistoric

The Natural History Park portion of the Zoo. To be relocated and improved. (Page 37)

THE PLAN

The photograph of the model below, and the plan opposite represent the Calgary Zoo and Natural History Park upon completed implementation of the Master Plan. It is not intended that the drawings show precise shapes or design of Zoo elements. It is intended, however, that they show the general location, relationships and character of those elements. Key numbers identify the major exhibits and structures throughout the Zoo.



LEGEND

NORTH AMERICA
1. Grizzly Bear
2. Black Bear or Barren Ground Grizzly Bear
3 Elk
4. Moose
5. Arctic Wolf
6. Caribou
7. Wood Bison & Pronghorn Antelope
8. Musk Ox
9. Mule Deer
10. Rocky Mountain Goat
11. Bighorn Sheep
12. Stone Sheep
13 Dall Sheep
14. Waterfowl Pond
15. Marmot
16. Prairie Dog
17. Lemming
18. Badger
19. Fisher
20. Arctic Fox
21 Wolverine
22. Lynx
23. Puma
24. Hawks
25. Turkey Vultures
26. Golden Eagle
27. Owls
28. Interior North American Exhibits & Public Service Facilities
29. Service Barn
30. Exterior Rest Area

PACHYDERMS
1. White Rhino
2. Asian Elephant
3. Hippo
4. Giraffe
5. Pachyderm Building for Winter Exhibition & Holding

SOUTH AMERICA
1 Maned Wolf
2. Alpaca & Rhea
3. Collared Peccary
4 Spectacled Bear
5 Capybara, Agouti, & Jabiru Stork
6 Ocelot
7 Tapir, Giant Anteater, & Spider Monkey
8 Waterfowl Pond
9. South American Building for Winter Exhibition & Holding

PRIMATES
1 Mandrill
2 Siamang or White-Handed Gibbon
3 Chimpanzee
4. Orangutan
5. Gorilla
6 Diana Monkey
7 Ring-tailed Lemur
8 Marmoset
9 Mangabey
10. Langur
11 Primate Building for Winter Exhibition & Holding

EURASIA
1 North China Leopard
2. Black Leopard
3 Snow Leopard
4 Japanese Macaque
5 Glass House Rest Area
6 Bactrian Camel & Persian Gazelle
7 Siberian Tiger
8 Eurasian Wild Boar
9 Siberian Roe Deer
10 Blackbuck, Sarus Crane, & Muntjac
11 Waterfowl Pond
12 Service Barn

SEMI-AQUATIC
1. Cormorant
2. California Sealion
3. King Penguin
4. Beaver
5. Proposed Building Expansion
6 Alcid
7 Otter
8. Grey or Harbor Seal
9. Existing Polar Bear
10 Existing Building Housing Interior Exhibits & Public Service Facilities.

AFRICA
1 Lion
2 Cheetah
3 Kusimanse
4 Caracal
5. Addax, Marabou, & Crown or Demoiselle Crane
6 Hartmann's Mountain Zebra, Ostrich, & Saddle-Bill Stork
7. Hyena
8. Waterfowl Pond
9. African Building for Winter Exhibition & Holding

ENTRY COMPLEX
1 Public Entry & Ticket Sales
2 Public Exit
3 Merchandise Sales
4 Administration
5 Education
6 Group Services Entry
7. Keeper Services
8 In-Zoo Transportation System Station
9 Orientation Center
10 Bus Drop-Off
11 Bus Parking (25 spaces)
12 Administrative Parking (30 spaces)
13. Keeper Parking (20 spaces)

AUSTRALIA
1. Red Kangaroo, Wallaroo, Emu, & Red-Neck Wallaby
2. Cassowary
3. Australian Building for Winter Exhibition & Holding

VIVARIUM

Complex to exhibit various reptiles, amphibians, invertebrates, & fish.

NOCTURNAL

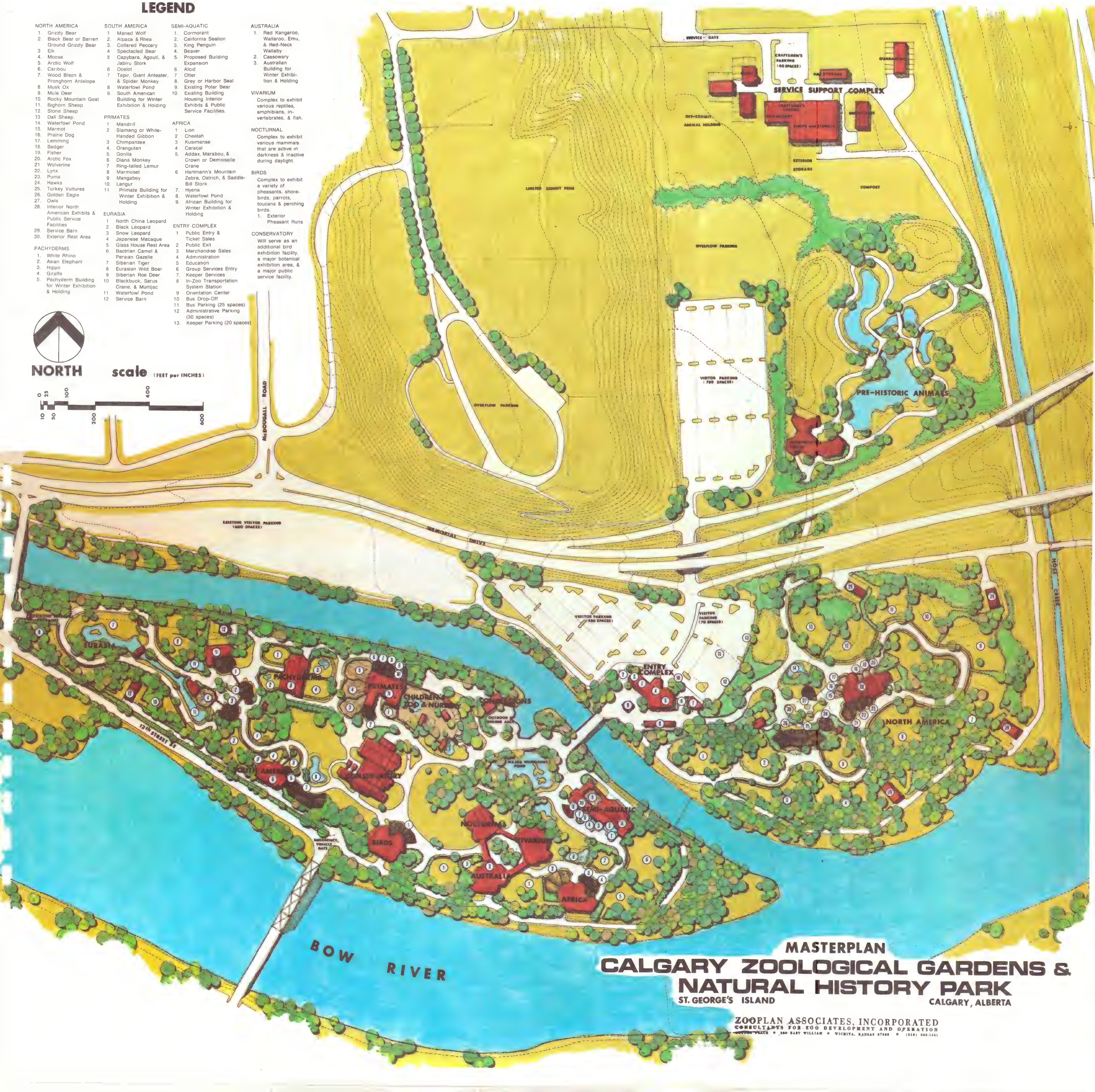
Complex to exhibit various mammals that are active in darkness & inactive during daylight.

BIRDS

Complex to exhibit a variety of pheasants, shore-birds, parrots, toucans & perching birds.
1. Exterior Pheasant Runs

CONSERVATORY

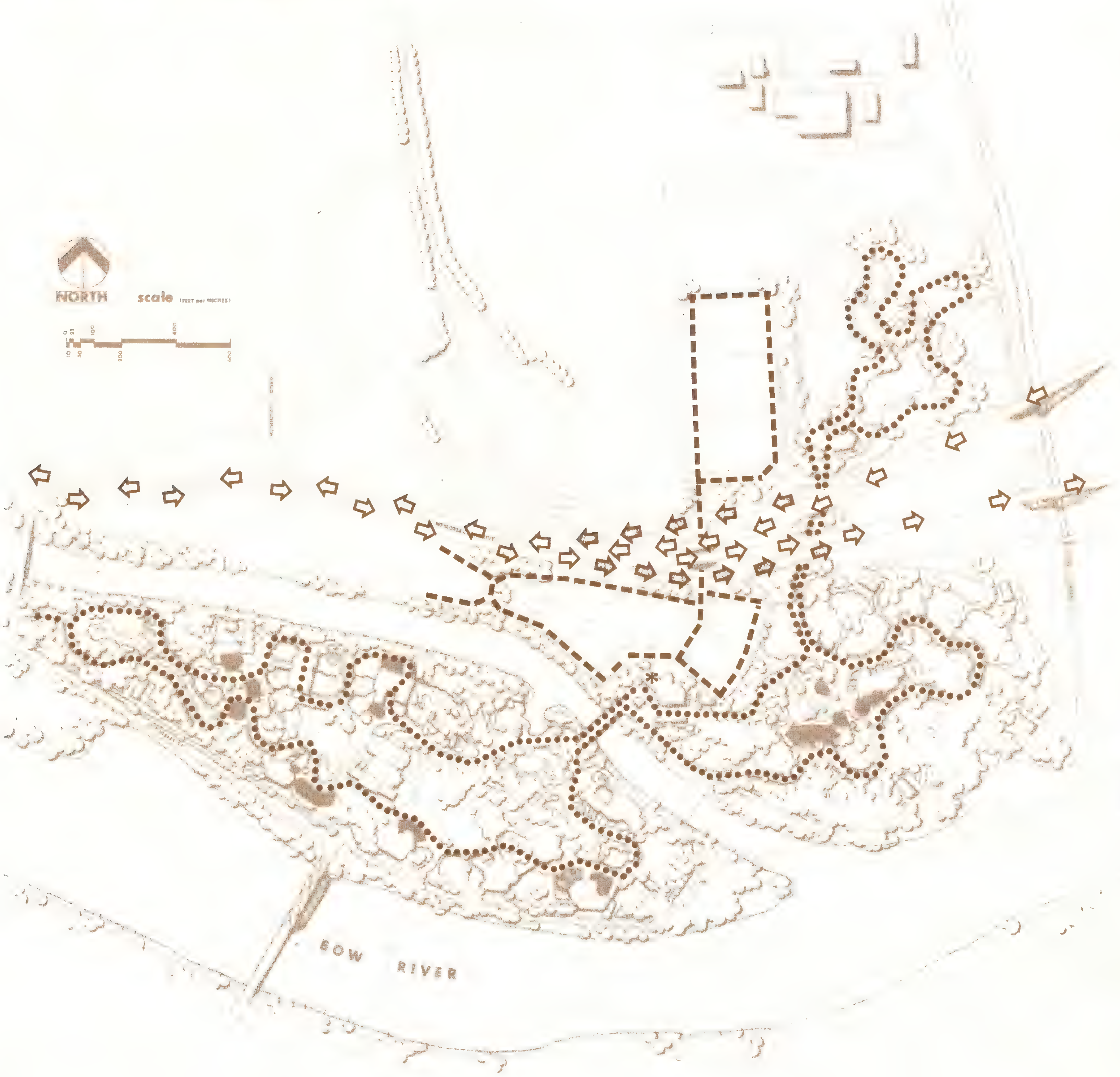
Will serve as an additional bird exhibition facility, a major botanical exhibition area, & a major public service facility.



MASTERPLAN
CALGARY ZOOLOGICAL GARDENS & NATURAL HISTORY PARK
ST. GEORGE'S ISLAND
CALGARY, ALBERTA

ZOOPLAN ASSOCIATES, INCORPORATED
CONSULTANTS FOR ZOO DEVELOPMENT AND OPERATION
[illegible] PLACE ● 209 EAST WILLIAM ● WICHITA, KANSAS 67202 ● (316) 263-1561

VISITOR CIRCULATION



SYMBOLS

●●●●●●●●●	**MAJOR PEDESTRIAN CIRCULATION**
▬ ▬ ▬ ▬ ▬	**ZOO VISITOR VEHICULAR CIRCULATION**
⇨ ⇨ ⇨	**MEMORIAL DRIVE EXPRESSWAY VECHICULAR CIRCULATION**
➡ ➡ ➡	**ON AND OFF RAMP CIRCULATION**
*	**PEDESTRIAN ENTRANCE AND EXIT**
*	**SEASONAL PEDESTRIAN ENTRANCE AND EXIT**

Internal visitor circulation patterns are designed to encourage an orderly right-hand traffic pattern, so as to minimize visitor disorientation and eliminate back-tracking insofar as possible. The plan arrangement provides for a shortened winter route with access to a maximum variety of animal life with minimum weather exposure.

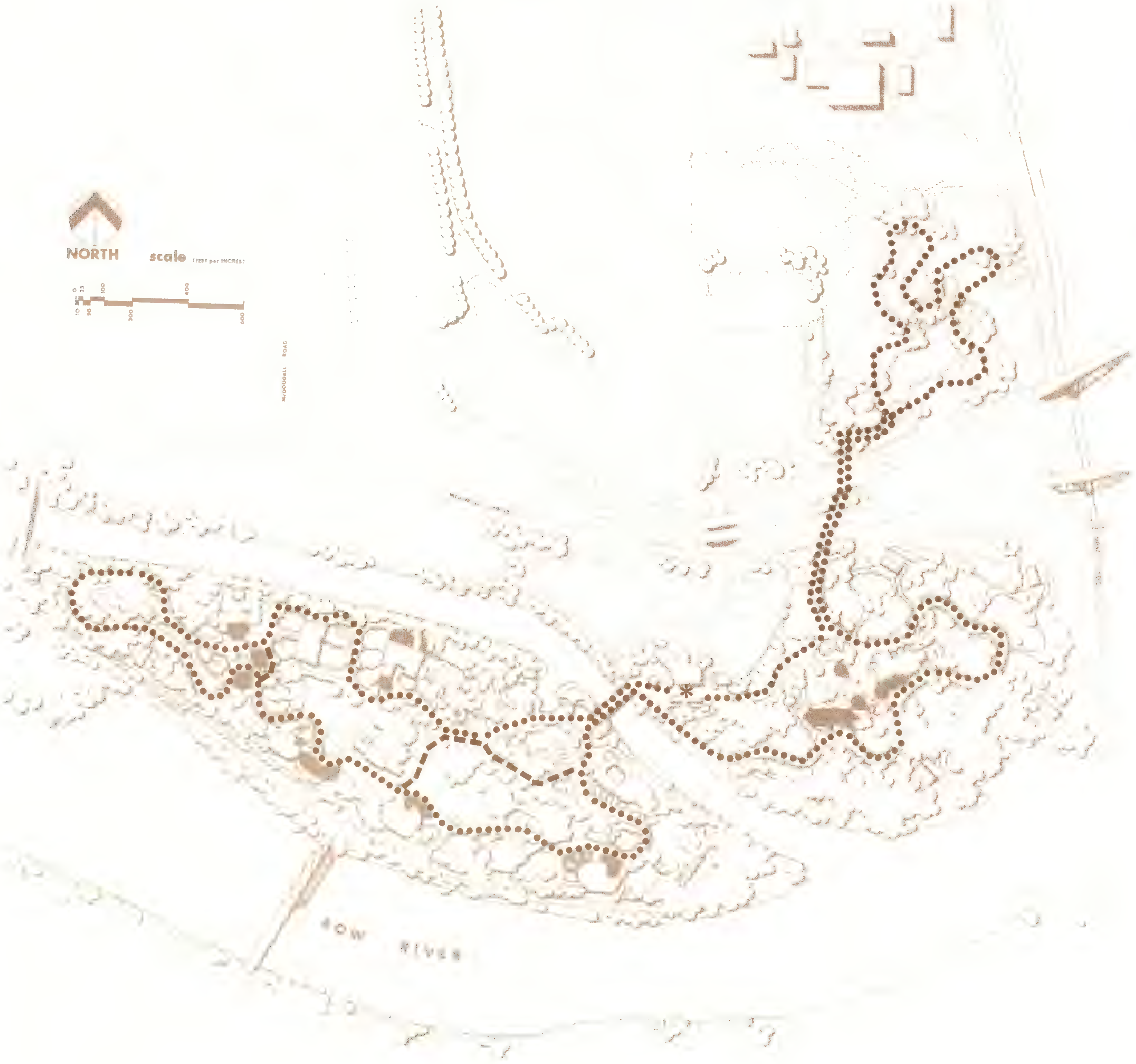
Pedestrian paths should be a minimum of twelve feet in width, with additional width at popular exhibit areas and where the pedestrian and trackless train routes coincide.

IN-ZOO TRANSPORTATION

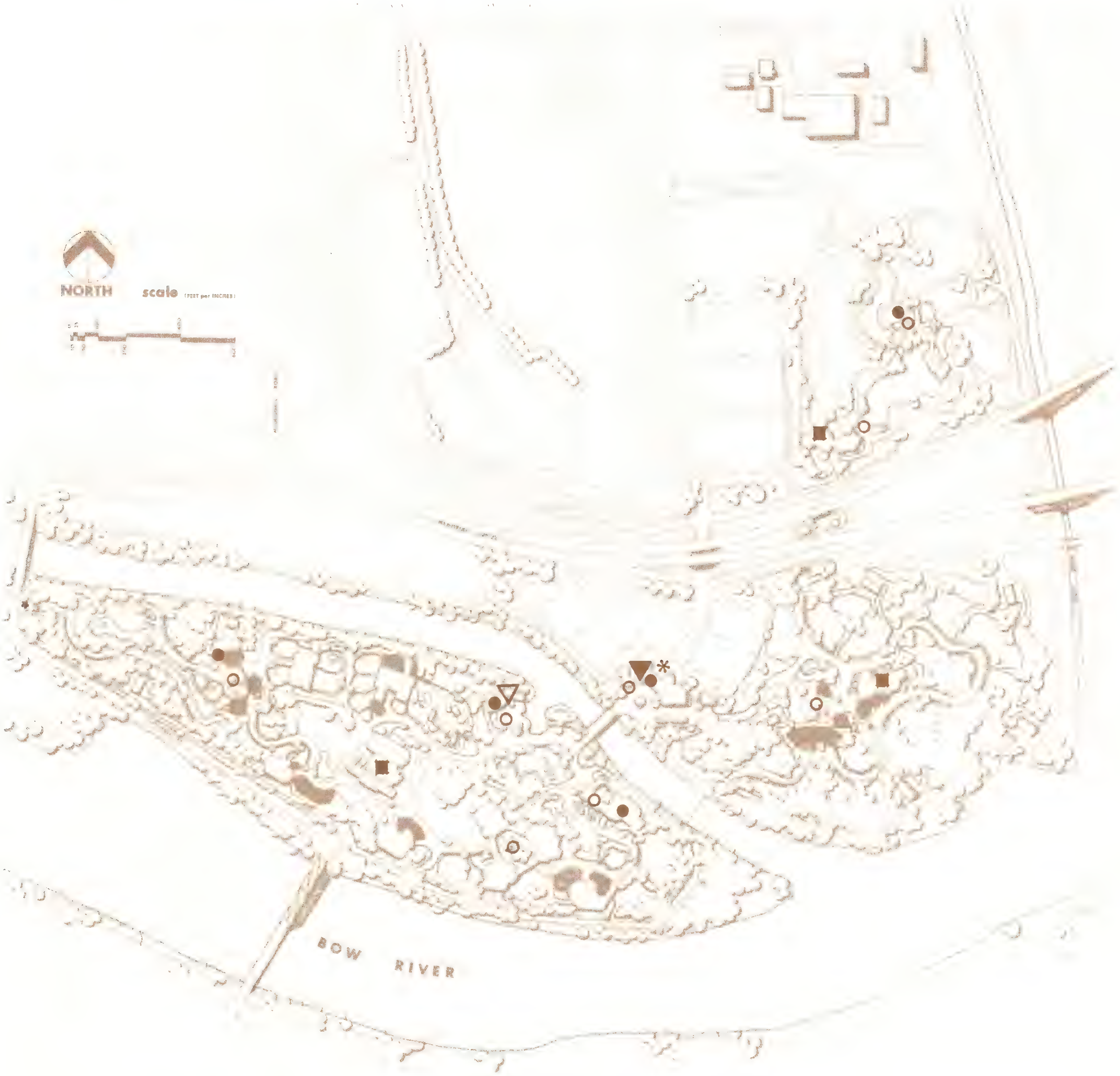
SYMBOLS

•••••••••	**SUMMER TRANSPORTATION ROUTE**
▬ ▬ ▬ ▬	**WINTER BYPASS ROUTE**
*	**PASSENGER PICK AND DISCHARGE POINT**

A trackless train, with guide-lecturer is an important adjunct to the Zoo. It can provide a way to see the Zoo for the disabled; a quick overview for the new visitor who can then return to the areas of greatest interest on foot; an educational introduction to the world of animals; and a fun trip for the casual visitor. It is also an income generator for the Zoo. With proper winterized rolling stock, the zoo-visit season will be extended for many persons.



PUBLIC SERVICES AND FACILITIES



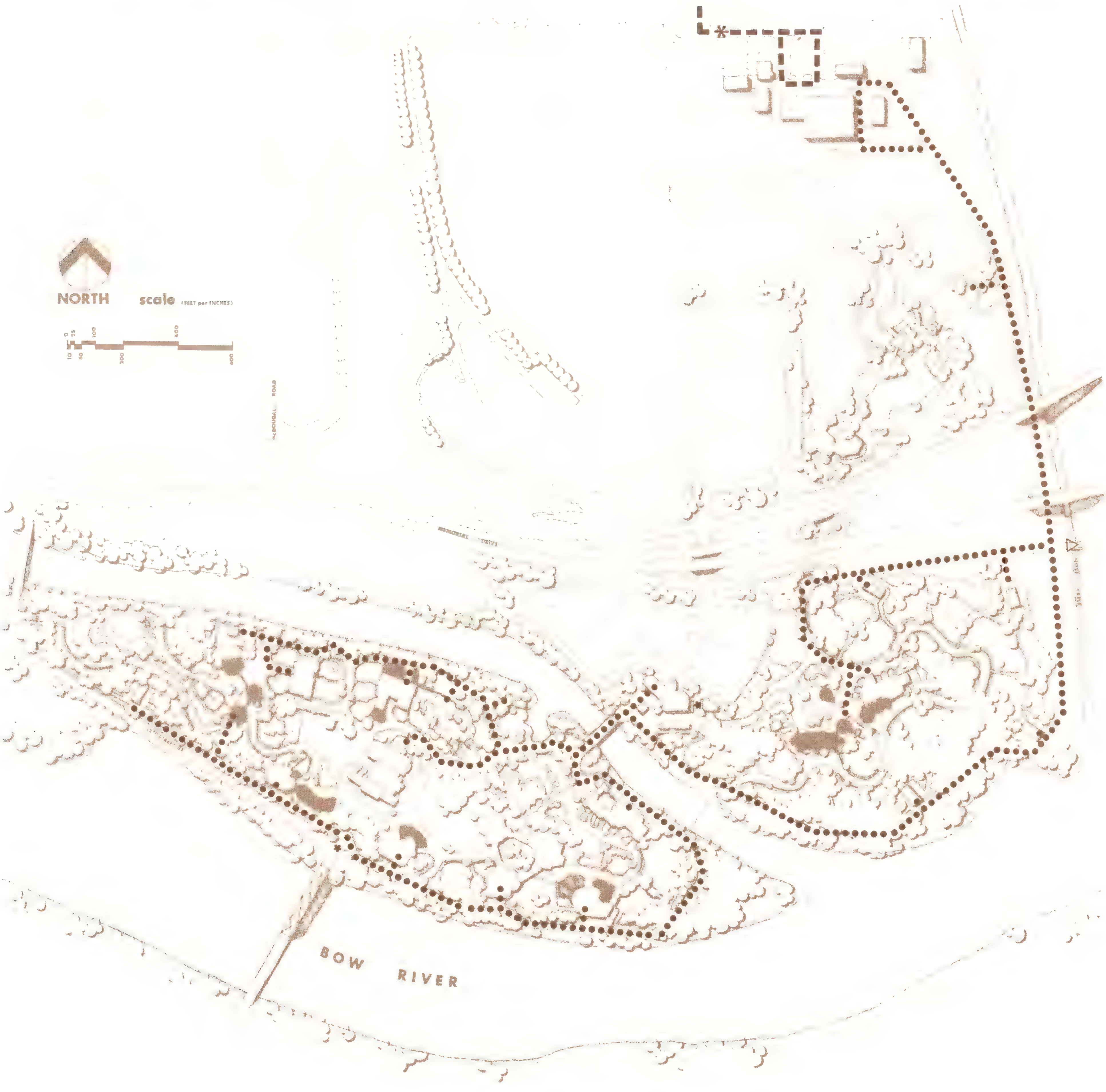
SYMBOLS

■	PUBLIC SERVICE FACILITY SATELLITE INCLUDING; SHELTERED REST AREA, PUBLIC TOILETS, AND MINOR FOOD SERVICE AND MERCHANT SALES
○	REST AREA
●	PUBLIC TOILET
▲	MAJOR MERCHANDISE SALES
△	MAJOR FOOD SERVICE (SEE PG. 22)
*	ENTRY COMPLEX (SEE PG. 21)
•	SEASONAL ENTRY

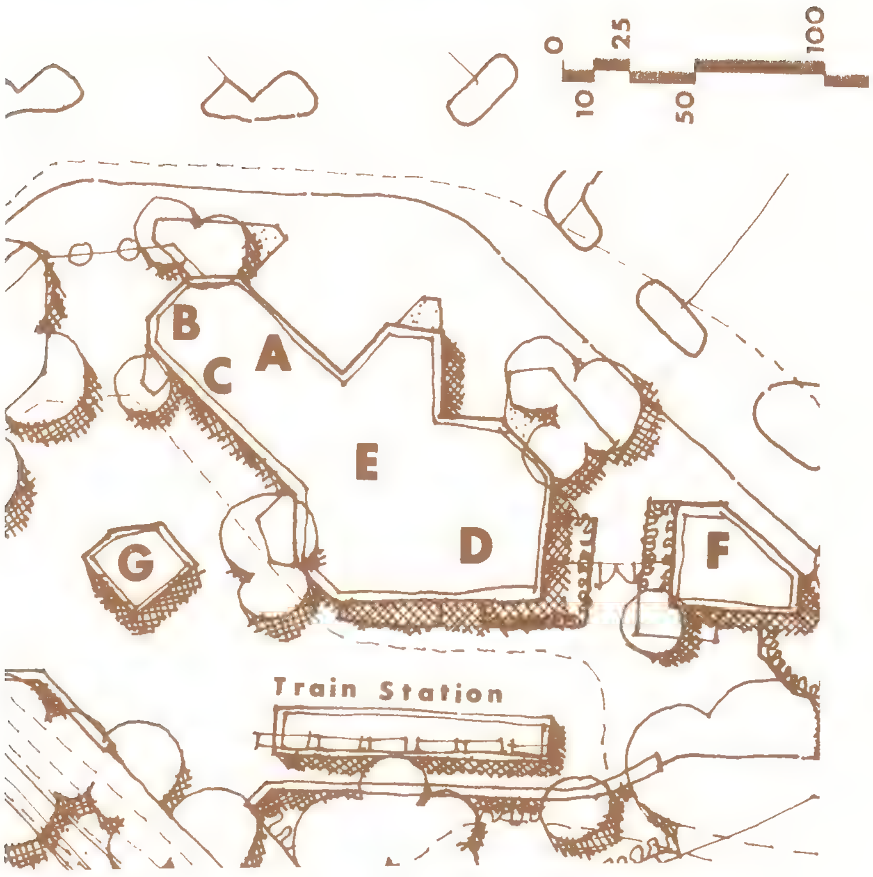
SYMBOLS

•••••••••	ZOO VEHICLE SERVICE ROUTES
✱	SERVICE ACCESS GATE
*	EMERGENCY VEHICLE ACCESS GATE
▽	SERVICE ACCESS TO IRRIGATION CANAL AND WEIR
- - - - -	SERVICE ACCESS CIRCULATION

SERVICE ROUTES



ENTRANCE AREA



Concentration of these facilities at one point on the security perimeter of the Zoo provides for ready access to the offices and educational facilities without the necessity for entering the Zoo proper. In providing a single major point of public contact, the problems of security, control and staffing are minimized. It is anticipated that upon completion of the plan, including all parking facilities and walkways along the Bow River, that the existing seasonal entrance at the West end of St. George's Island can be closed.

Seating in rest areas both within the Zoo near the exit and outside the Zoo, near the entrance, must be provided.

A Entry Facility

Contains ticket sales facilities capable of handling 880 transactions/hour, entrance gates, first aid, lost and found, security, public toilets, and public telephones. Approximate areas required are:

Ticket Sales..............	400 S. F.
First Aid.................	200 S. F.
Security & Surveillance....	300 S. F.
Lost and Found............	100 S. F.
Comptroller & Cash Room....	250 S. F.
Public Toilets............	1,000 S. F.
Circulation, Structural & Mechanical.............	600 S. F.
TOTAL	2,850 S. F.

B Gift Shop

An expanded gift shop will be able to provide many items wanted by the Zoo visitor which are not now available, and revenues should increase significantly. Entering visitors will find film and guidebooks at hand, while the departing visitor will be able to purchase books, carvings, pictures, souvenirs and other items at a point which will not require him to carry his purchases during his trek around the Zoo.

Approximate Area....1,000 S.F.

C Rentals

The rental center will have strollers and wheel chairs for those that need them, as well as camera rental and a parcel or baggage checking facility.

Approximate Area......900 S.F.

D Education

Relocated educational facilities are designed to serve the Calgary Zoo's expanded role as an educational institution. Its location will permit school and other group tours to assemble and receive orientation prior to their tour of the zoo. Lectures and classes held outside of Zoo open hours are available to the public without breech of Zoo Security.

The classrooms will be separated by a folding partition so that a large lecture room is available when needed by combining these areas. Complete audio-visual equipment will make maximum use of contemporary teaching techniques.

Approximate areas required are:

2 classrooms @ 750 S.F. each..	1,500 S.F.
Teacher's Aide Office.........	150 S.F.
Kitchen......................	150 S.F.
Toilets......................	100 S.F.
Lobby and Coatroom...........	400 S.F.
Film Storage and Projection...	150 S.F.
Circulation, Structural & Mechanical................	800 S.F.
TOTAL	3,250 S.F.

E Administration

Offices for the Zoo administrative staff are located so as to be accessible to vendors and others having business with the zoo, and also in a close working relationship to the educational facilities and the public entrance. These facilities will provide a common use library and a conference room large enough to serve for Zoological Society Board meetings and divisible into two smaller rooms for staff conference and other meetings so as to minimize the size needed for individual offices. Approximate areas required are:

Director and Secretary Offices.................	400 S.F.
Zoological Society Executive Secretary and Secretary...........	350 S.F.
Curatorial Offices 5 @ 150..	750 S.F.
Veterinarian's Office.......	150 S.F.
Secretarial Pool...........	400 S.F.
Reception and Receptionist..	600 S.F.
Public Relations Offices....	400 S.F.
Library....................	400 S.F.
Print Room.................	100 S.F.
Conference Room 2 @ 250.....	500 S.F.
File Room..................	150 S.F.
Docent Office..............	250 S.F.
Toilets....................	100 S.F.
Coffee Bar.................	15 S.F.
Circulation, Structure & Mechanical..............	1,700 S.F.
TOTAL	6,265 S.F.

F Keepers

A lunch room, locker room and check-in facility for animal keepers. Keepers will report to work here, at a location convenient for them to confer with curatorial staff and receive instructions when required.

Approximate Area....1,000 S.F.

G Orientation Center

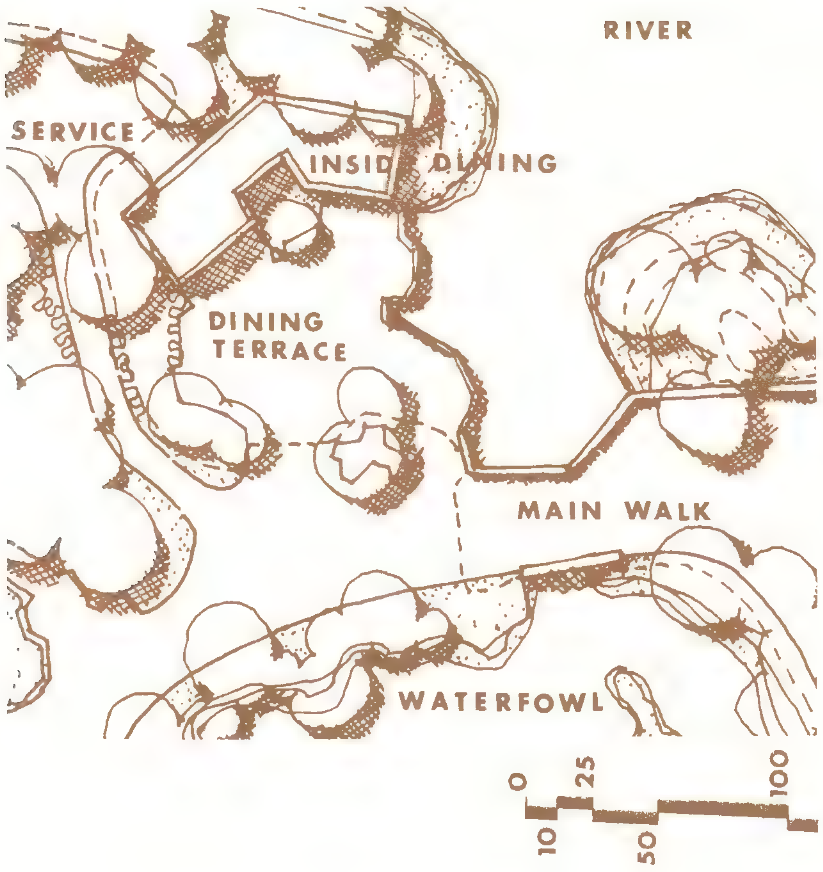
The Orientation Center will provide strategically located information for the zoo visitor about where to find what interests him in the Calgary Zoo, what he can expect to see there, any special events which are taking place, and graphic displays illustrating the fundamental principles of animal life to aid his understanding of what he will be seeing.

Exterior surfaces of the Center will display a map of the zoo, schedules for such activities as feeding times, and changeable notice of current events at the Zoo, such as new acquisitions or births.

Inside, graphics, dioramas, audio-visual aids, and perhaps a few live animals will be used to illustrate such principles as adaptation to environment, camouflage, food-chain, social organization, and others. Appropriate graphics will relate such displays to where and how these principles can be observed in various species throughout the zoo.

The Orientation Center's location is convenient for the exiting visitor who wants to reinforce what he has learned, or for those who did not stop for orientation going in, but whose interest has been piqued during the visit.

MAJOR FOOD SERVICE AREA



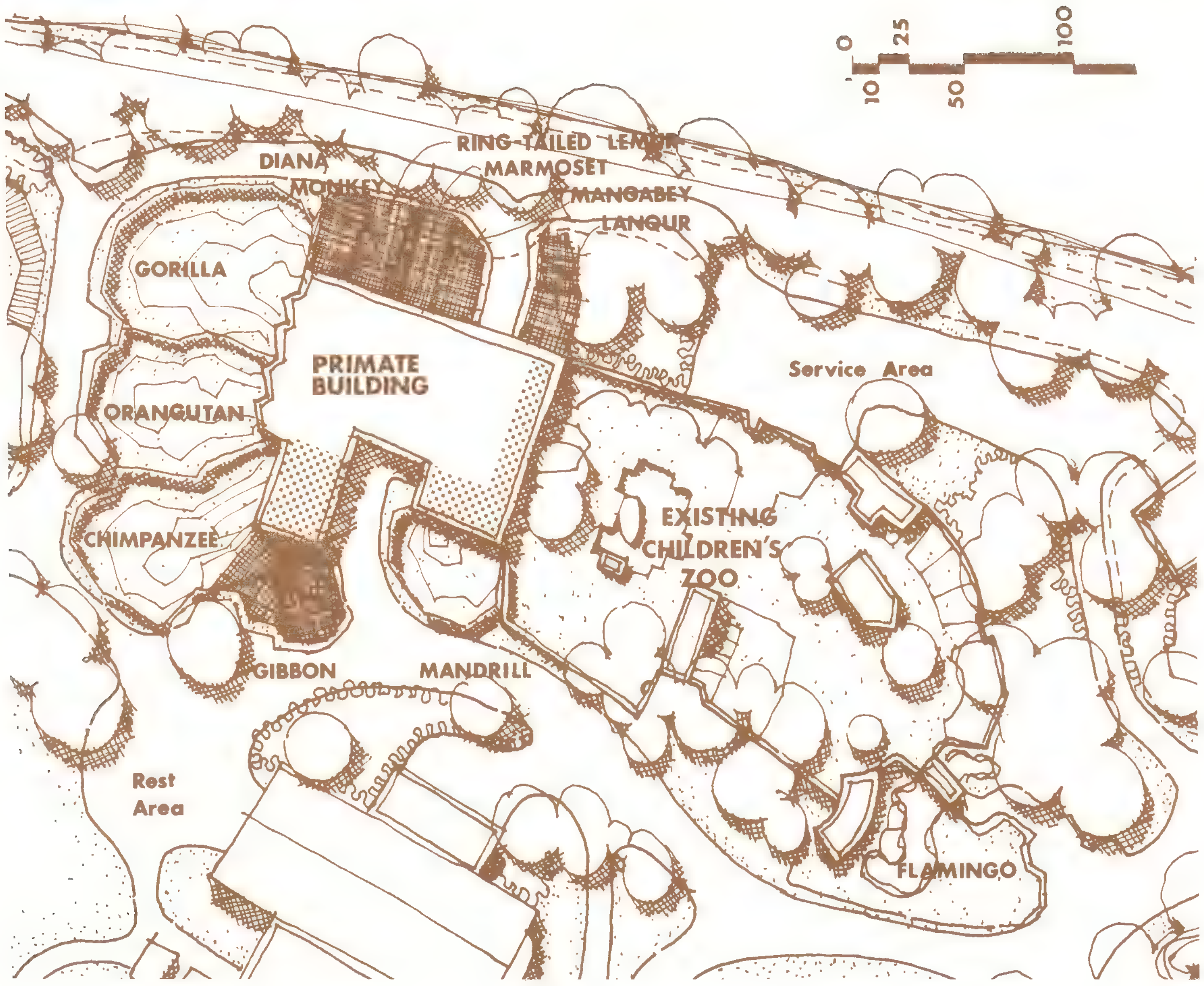
An attractive and centrally located food service facility will overlook a waterfall, a waterfowl lagoon, and will provide a mainstream location for people-watching. Good food served in attractive and comfortable surroundings from an economical family-oriented menu will enhance a visit to the Zoo and generate substantial revenue for the support of the Zoo.

Indoor all-weather dining space of about 3,500 square feet will be supplemented by an outdoor dining terrace of an additional 10,000 square feet to provide busy day capacity.

Kitchens will do food preparation for the satellite food service areas in the Conservatory and the North American Glass House. Receiving and bulk storage at the Service and Support Area (Page 38) will eliminate all truck traffic, other than in-zoo service vehicles, from the Zoo grounds.

REST AREA at FOOD SERVICE COMPLEX

PRIMATES - CHILDREN'S ZOO



Primates

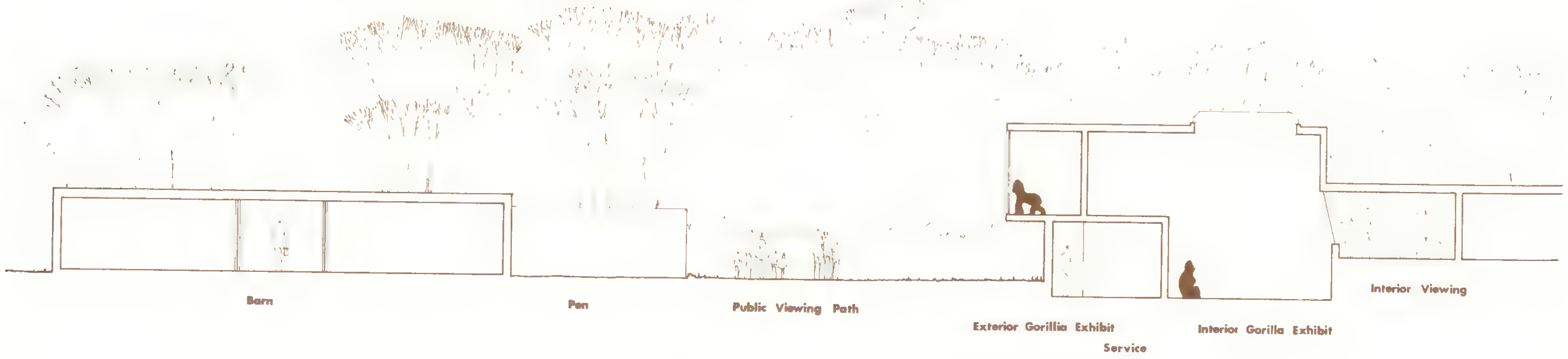
Existing buildings, with some additions and modifications will be used to provide for the apes and other primates. The existing gorilla and Orangutan quarters will be extensively modified inside and out to place the apes on the same level as the viewer, and provide a more natural appearing habitat. Spacious outside enclosures with glass barriers to allow close-up viewing will replace the present iron bar outdoor cages.

New additions will give the chimpanzees, gibbons and Mandrills new and spacious homes. The high-flying gibbons will require a light wire mesh enclosure over their climbing trees and swinging ropes.

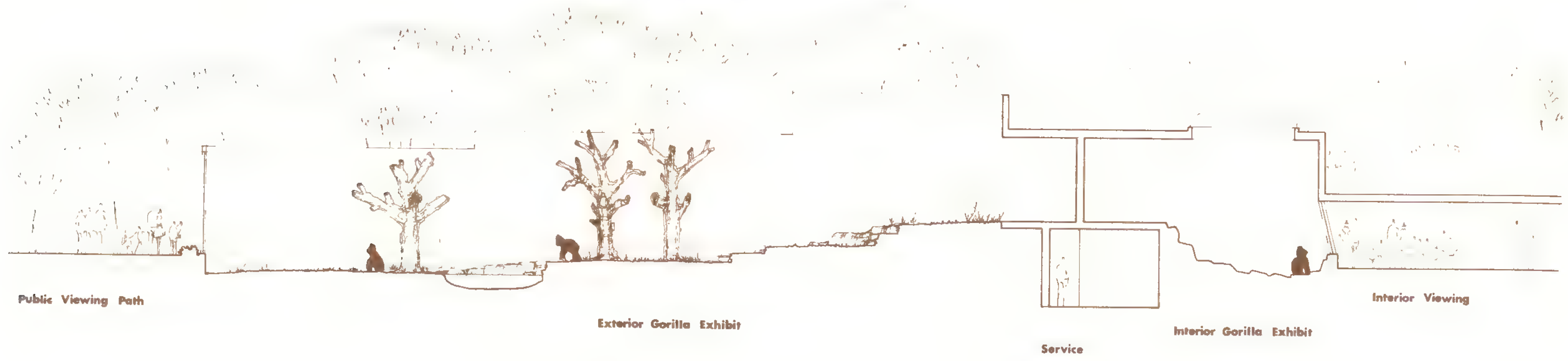
Conversion of the old noctural house, and the addition of new outdoor mesh enclosures will house Diana Monkeys, Ring-tailed Lemurs, Marmosets, Mangabeys and Langurs. Spaces will be large enough for social groups where this is appropriate for the species.

Both indoor and outdoor exhibit spaces will be naturalized with appropriate rocks, pools, trees and other exhibit artwork. Brightly lighted interior exhibits will minimize reflections in the glass barriers from the viewer side which will be more dimly lighted by spill light from the exhibits. A comprehensive system of graphics will identify the animals and explain the differences and similarities between the various species.

SITE SECTION EXISTING PRIMATES BUILDING



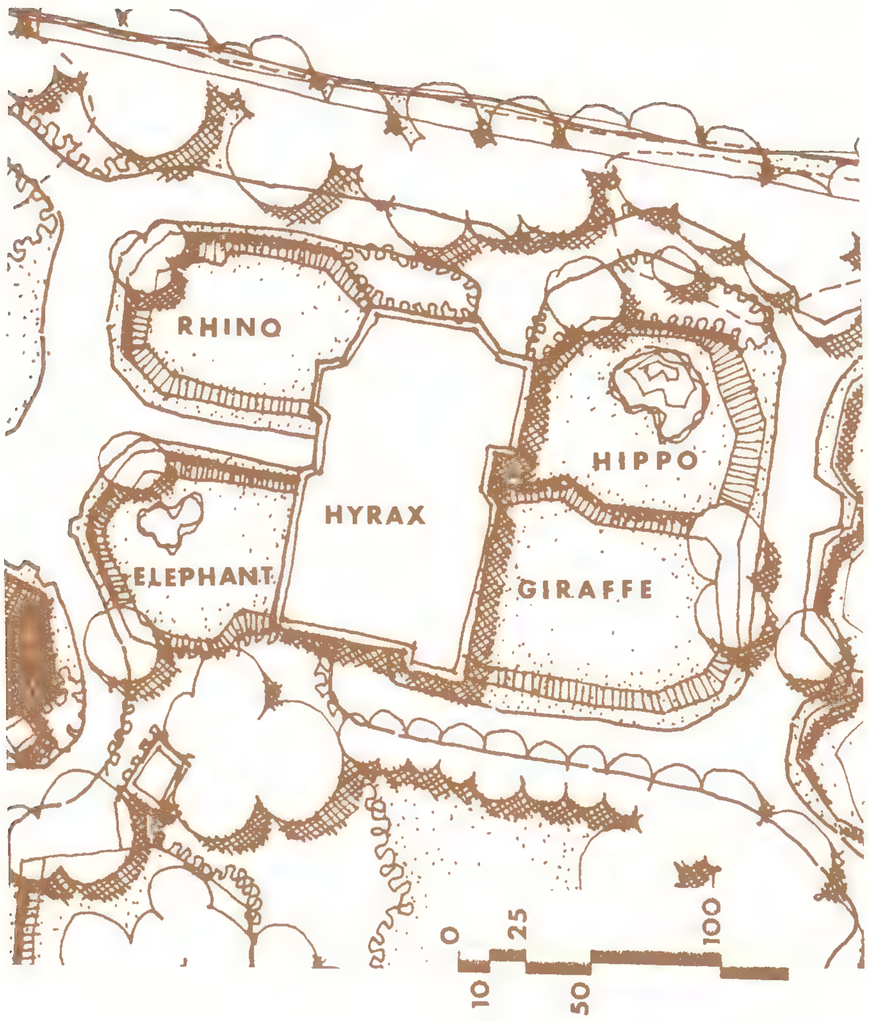
SITE SECTION PROPOSED PRIMATES COMPLEX



Children's Zoo

The recently completed Children's Zoo is to be retained in its entirety, supplemented by the addition of a nursery for primates, carnivores and small animals born at the Zoo, which will be located in the new primate facility facing into the Children's Zoo; the replacement of the old Flamingo house to complement the new pool; and the addition of a winterized indoor contact area.

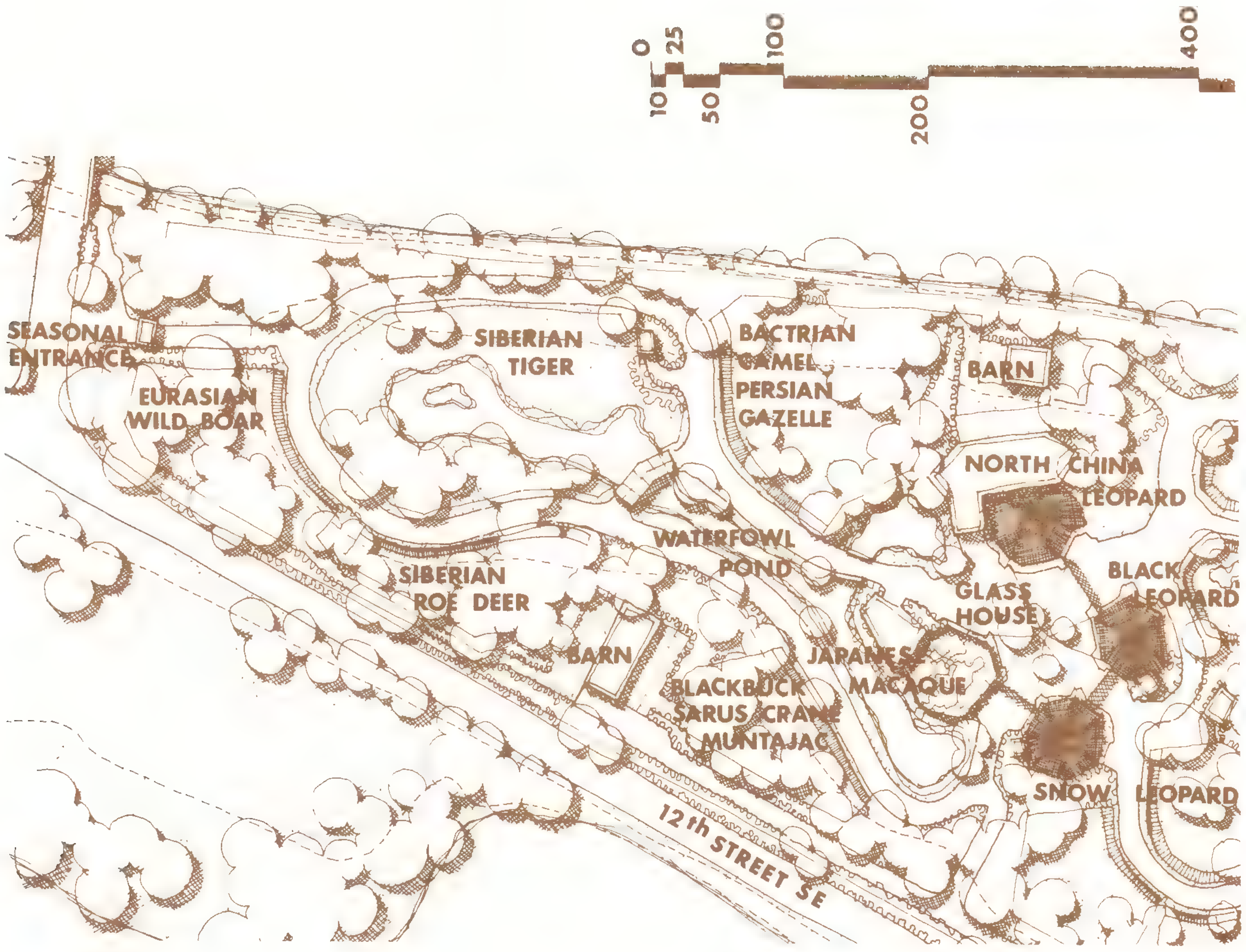
Grizzly Bear Cubs



PACHYDERMS

As one of the existing facilities to be retained, the Pachyderm exhibits will require only aesthetic improvement in the outdoor yards and interior quarters. The hippos, rhinos, giraffe and hyrax will be retained as they are at present. It is recommended, however, that the African elephant be replaced with another female Asian elephant to reduce possible future conflict and minimize operational difficulties. Somewhat enlarged and more natural appearing exterior yards, particularly with removal of the pipe barriers at the giraffe yard, will give these popular animals even more appeal for the Zoo visitor.

EURASIA



The focal point of the Eurasian continental exhibit will be the Eurasian Glass House. Summertime open sides, which can be closed in winter, will permit botanical exhibits related to the Japanese Macaques and the Leopards. These hardy animals can be seen in their lightweight mesh enclosures in the summer and through glass from the protected people environment of the Glass House in the winter. This beautiful wooded portion of St. George's Island will provide an immediately effective environment for display of hoofed stock and the other inhabitants of the Eurasian Complex.

Bactrian Camel
Persian Gazelle

Visitors will see a herd of gazelles in a common moated enclosure with the group of double-humped camels. Back-planted unobtrusive fencing will control the side and rear of the paddock, leading to off-exhibit holding pens connected to a new barn for camels and stalls for gazelles in the existing waterfowl building.

Blackbuck
Sarus Crane
Muntjac

The herd of beautifully marked blackbuck will be shown in an open moated paddock with the Muntjac and Sarus Cranes. The cranes will have an escape area to allow seclusion from the antelope and deer for breeding purposes. Back-planted inconspicuous side and rear fences lead to off-exhibit holding pens and a barn shared with the Roe Deer.

Wild Boar

At the west end of St. George's Island, as the visitor path turns around the Siberian tigers and heads back east, it is bordered by the wild animals from which domestic pigs were derived. The exhibit is an open, moated area like the other Eurasian hoofed stock, and connected to the service barn in the area.

Siberian Roe Deer

These small graceful animals will be seen across the moat in an open wooded area very similar to their preferred habitat in nature.

Waterfowl

Part of the existing waterfowl pond will be retained to show the colorful waterfowl of Eurasia which are related to the larger animals on display in this area. Concealed barriers below bridges will permit separation of species where required for breeding purposes. A portion of the existing waterfowl building will continue in use as winter quarters.

Japanese Macaque

Black Leopard

If the visitor will watch carefully when the sun-angle is right he will be able to see the spots on this variety of leopard, although it otherwise appears to be solid black. This exhibit is located so that it can be viewed from the outdoor path or from the Glass House.

Siberian Tiger

These magnificent felines have been located in an existing natural setting of water, trees and grass. The large area will permit more natural behaviour, but within view of the Zoo visitor, since all parts of the area can be seen from the surrounding walkway. The male and two female Tigers will be restrained by a welded-wire fabric barrier of minimum opacity, except at the bridge at the East end of the exhibit, where viewing will be through a glass wall. In the winter, complete enclosure of the bridge will provide a protected area from which the Tigers can be seen playing in the snow. Three dens approximately 8' x 8' will be provided, with proper keeper access and shift facilities.

Japanese Macaque

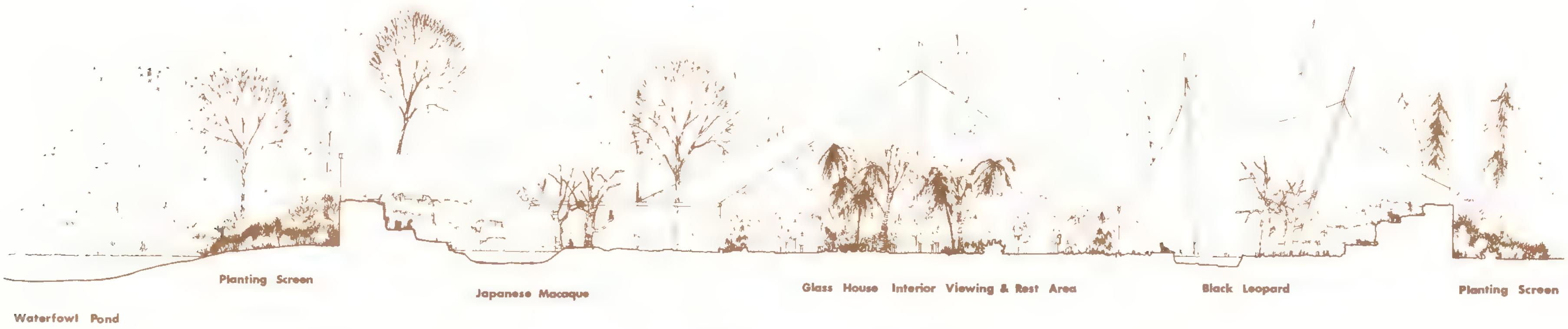
Hardy, and accustomed to the cold and the snow, these primates will be displayed in a large colony of about 15 individuals. With an active group of this size in a naturalized glass-enclosed area of pools, rocks and grass, the interesting behaviour patterns and social organization of this species can be observed to the best advantage.

Snow Leopard

An especially beautiful example of the leopards to be shown from the Eurasian Glass House, this is another of the species that will make the Calgary Zoo an exciting place to visit in the winter. While the leopard pair are outside in their softly colored and luxuriously textured fur coats, they can be observed by the Zoo visitor from the protected warmth of the glass house.

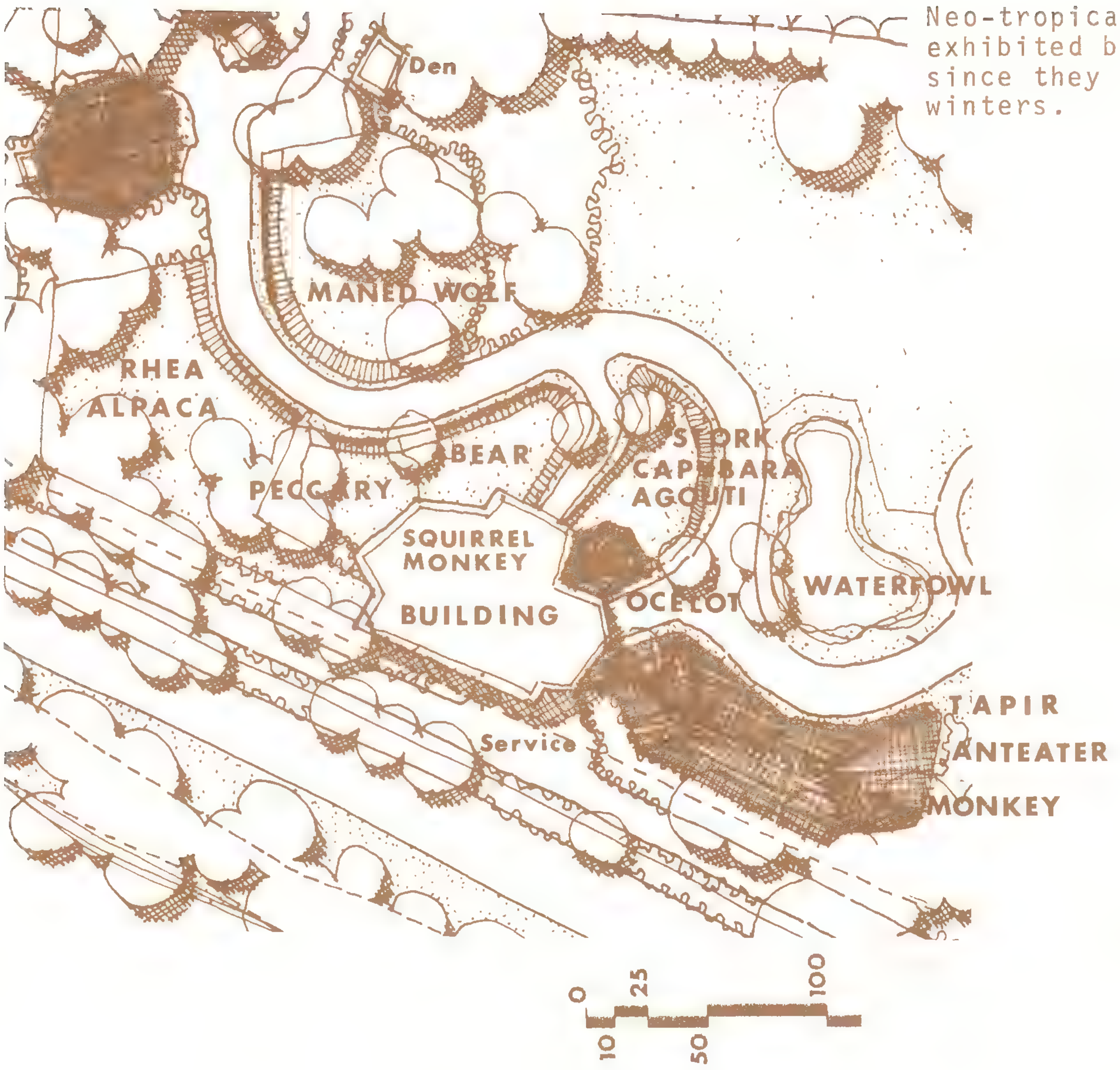
North China Leopard

The desired emphasis on northern animals is furthered by the inclusion of this species in their wire fabric enclosure. Use of a portion of the existing waterfowl building will provide separate dens for each animal of the pair, and necessary facilities for keeper care.



SITE SECTION EURASIAN GLASS HOUSE

SOUTH AMERICA



Neo-tropical animals in this area will be exhibited both indoors and outdoors, since they are not hardy in Canadian winters.

Tapir
Giant Anteater
Spider Monkey

Within this large welded-wire fabric enclosure are a pool for the water-loving tapirs, and tree forms for the agile monkeys, with grass and rocks. A similarly equipped indoor exhibit of about 625 square feet will make this community display available to the public in bad weather, when the animals can't be out.

Tapir

Capybara
Agouti
Jabiru Stork
Waterfowl

A common exhibit area for three very interesting species. Capybara, the largest of the rodents, will contrast with the smaller burrowing Agouti and the New World's largest stork. The moated exterior yard will contain grass, trees, rocks and water, and an interior glass-fronted exhibit of about 375 S. F. will provide bad weather quarters. Across the walk a pond will display typical waterfowl of the continent.

Spectacled Bear

This sole representative of the bear family in South America will have a spacious outdoor yard with rocks, grass and climbing trees. Inside the South American building, the visitor will have an opportunity to see into the dens when the bears are not outside.

Ocelot

The see-through wire mesh enclosure for this attractive pair of cats is located next to the entrance of the South American building, and will connect to an interior exhibit area behind glass. Both exhibits will be equipped with rocks and climbing trees.

Collared Peccary

A tropical forest environment will be recreated behind an open moat for the group of peccaries. A similar environment behind wire mesh or glass in the 450 S. F. interior exhibit will complete the display. Within the interior area allocation, will be shift and off-exhibit holding areas.

Alpaca
Rhea
Water Fowl

Behind an open dry-moat barrier, Alpaca and Rhea will be exhibited together. The Rhea will also have an interior exhibit of about 400 S. F. behind glass or wire mesh, and a holding area.

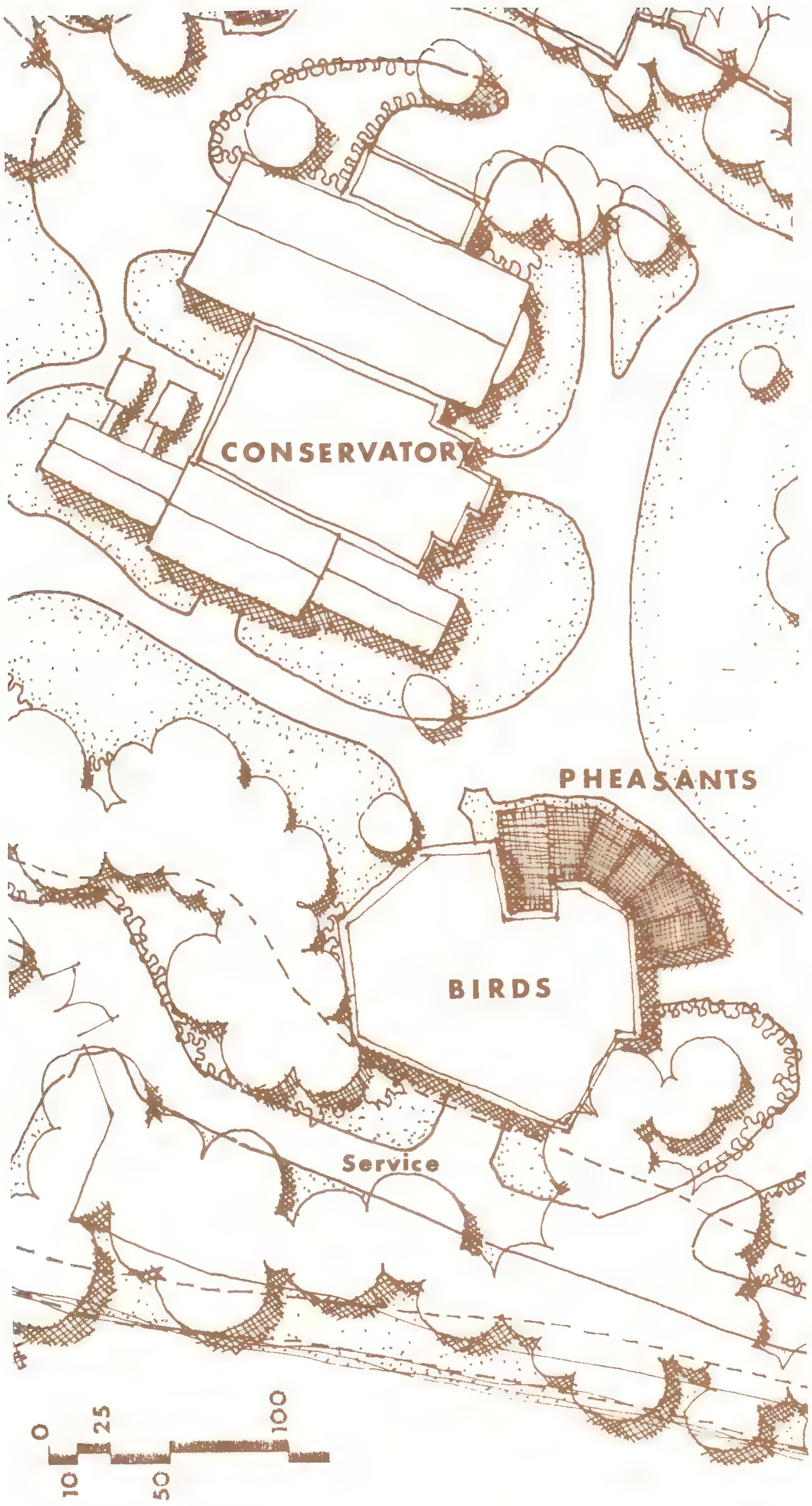
Maned Wolf

Across the path, opposite the Alpaca and Rhea, is a natural appearing exhibit for a pair of the long-legged wolves that resemble the smaller red fox. A pair of dens and keeper facilities will be concealed in planting and connected to the exhibit with a wire mesh runway.

Squirrel Monkey

An interior, glass-fronted exhibit with climbing trees to demonstrate the arboreal nature of this monkey, will be a year-round exhibit.

CONSERVATORY
BIRDS



Conservatory

The Conservatory will be retained as the major botanical exhibit in the Zoo. Cages for birds of the parrot family will be removed, and additional birds introduced, of species which can be maintained without excessive damage to the plants. With completion of the new major food service area, some modification of this function, such as a change to a Tea Room atmosphere, will be feasibile.

Birds

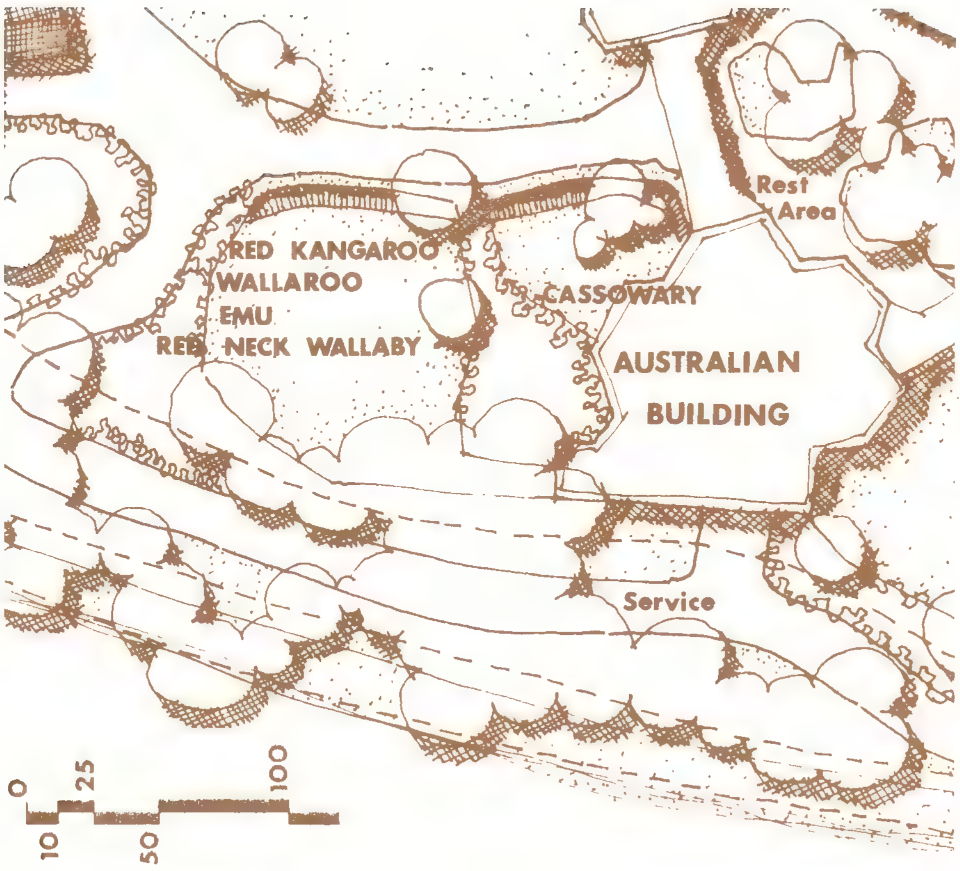
A variety of birds from the different geographical regions of the world will be displayed indoors, with exterior cages added for the Pheasants and allied species. Perching birds and shore birds may be displayed in open-fronted exhibits with proper control of the light differential between the exhibit and the darkened public spaces. Although these birds would have physical access to each others territory, the creation of appropriate natural habitats for each would make them most comfortable in the proper location. Inconspicuous black-colored wire fabric or glass will be used for the other varieties. Included in this structure will be the following:

Pheasants and Allies (20 species)
Shore Birds (15 species)
Parrots and Allies (10 species)
Toucans and Allies (3 species)
Perching Birds (50 species)

In addition to the exhibits, this facility will provide for off-exhibit holding, an incubator room, a kitchen and a keeper work area.

AUSTRALIA

A continental exhibit related to the Vivarium and Nocturnal buildings by covered passageways, enclosable in the winter to provide protection for the visitor in this part of the Zoo, since these animals cannot be outside in severe weather.



Cassowary

Exhibited behind a dry moat on the exterior, and behind glass inside, these very colorful flightless birds from Australia's primeval forests will be seen in close proximity to the marsupials and Emu. Separation will be provided for the couple during hatching and raising of the young.

Wombat

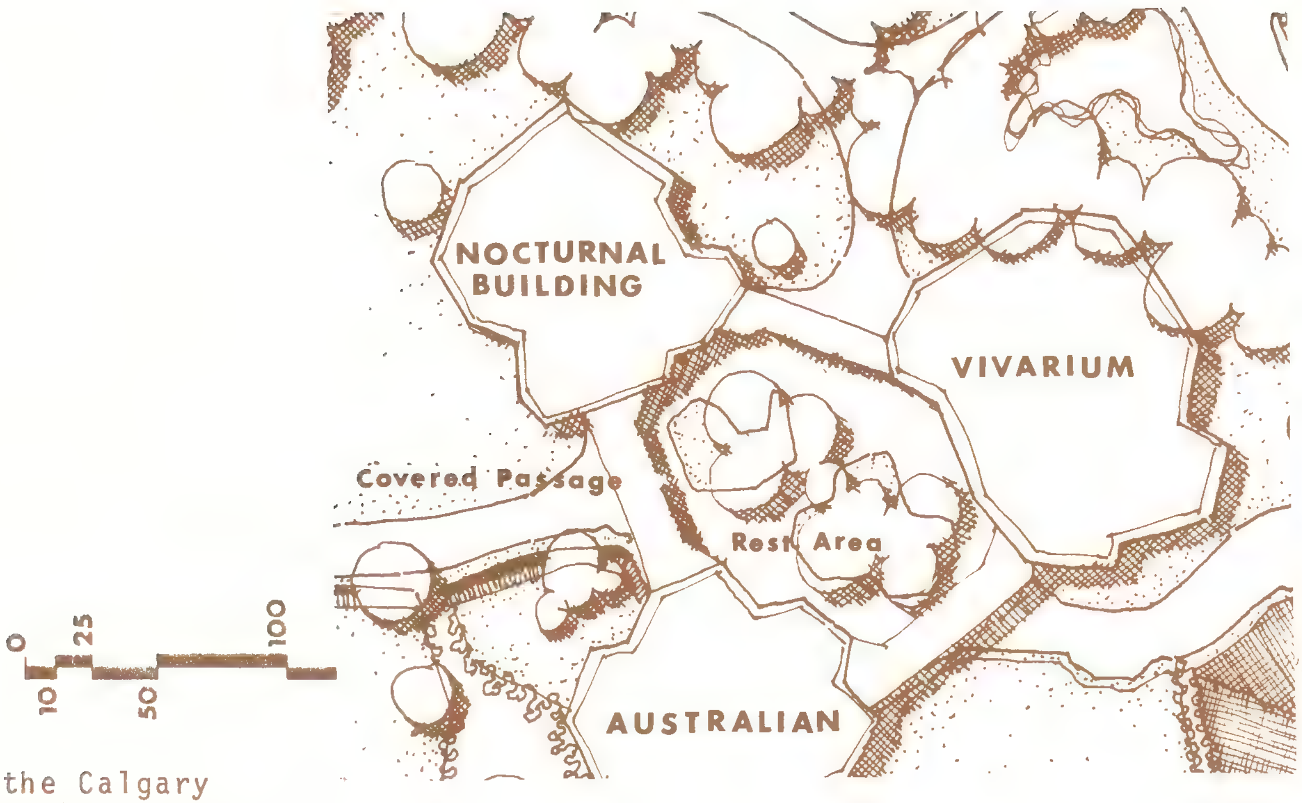
Although considered nocturnal, these animals are shown here, rather than in the Nocturnal Building, so that the Zoo visitor may relate this marsupial, which more resembles a small bear, to the more commonly recognized Kangaroos, Wallaroos, and Wallaby.

Red Kangaroo

Emu
Red Kangaroo
Wallaroo
Red Neck Wallaby

The marsupials which mean Australia to most Zoo visitors will be grouped in a large exterior yard with the Emus, whose ability to get along with others is better than the Cassowary's. Grass, trees, rocks and water will grace both the outdoor, and the 1,600 S. F. interior exhibit area. Interior off-exhibit holding stalls will also be provided, as well as the necessary keeper's work and storage facilities.

VIVARIUM NOCTURNAL



Vivarium

This facility will enable the Calgary Zoo to show some life forms which have not previously been well represented in the Zoo, and to show others such as fish and invertebrates which have been totally missing from the collection.

All exhibits will be interior exhibits constructed to represent the natural habitat of the species being displayed, and will be brightly lighted to minimize reflections in the glass fronts through which visitors will view the exhibits.

Among the exhibits to be included are:

HERPTILES

- Giant Snake (1 species)
- Poisonous Snakes (2 species)
- Native Canadian Snakes (3 species)
- Miscellaneous Snakes (7 species)
- Tortoises (3 species)
- Turtles (5 species)
- Lizards (6 species)
- American Alligators

AMPHIBIANS

Six species, selected for variety.

INVERTEBRATES

Twelve species, representative of the major families.

AQUATIC DISPLAYS

- Alberta Lakes and Rivers
- British Columbia Rocky Shore & Tidal Zone
- North Pacific Open Ocean
- Tropical American River

The Aquatic Displays will be large community tanks simulating the underwater environment of the regions noted above. Where it is necessary for the protection of some of the inhabitants from their neighbors, the tanks can be imperceptibly divided while giving the appearance of a single water habitat.

Slow Loris

Nocturnal

A specialized display exhibiting various animals with a common behavioural trait, activity during the hours of darkness and sleeping in the daytime. Within this building, artificial lighting will reverse night and day so that the visitor can see the animals in their moonlight world. At night, bright lighting will provide the animals with their daytime and maintain normal rythmic cycles of light and dark.

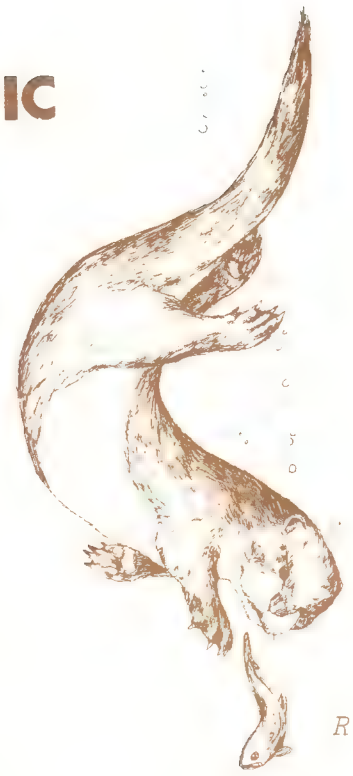
The focal point of this complex will be a large community display, naturalized with rocks, water and climbing trees, which can be viewed from three sides. It will contain Spiny Anteaters, Fruit Bats, Woolly Opossum, Owl Monkeys, Hairy Armadillos and Two-Toed Sloth.

Additional displays will include:

- Hedgehog - European Genet
- Ringtail Cat - Skunk
- African Porcupine - Galago
- Slow Loris
- Binturong
- Fennec Fox

Public entrance and exit will be designed to provide enough distance between the outdoors and exhibits to aid in eye adaptation.

SEMI-AQUATIC



River Otter

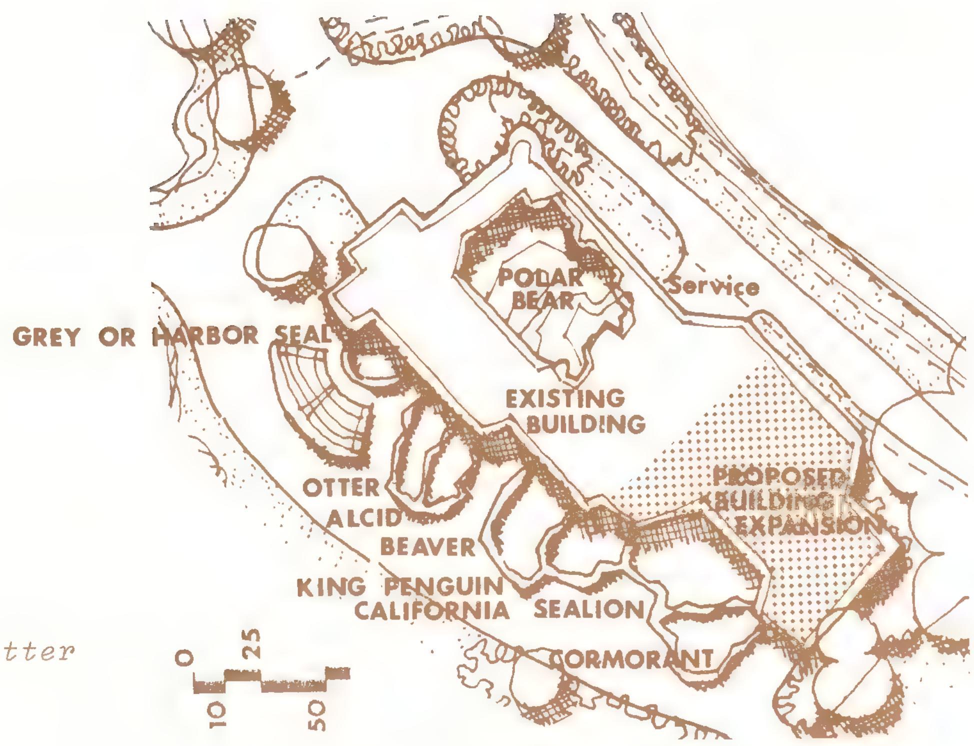
Existing

The existing Polar Bear building will exhibit Northern Semi-Aquatic animals, utilizing existing facilities, but transferring the California Sea Lions to the new addition, and also moving the Penguins to make room for a display of Alcids.

The Polar Bear display will be modified aesthetically, to make this popular and well-conceived exhibit even more appealing. Background enclosure walls which more realistically represent a glacier face will contrast with a natural floor of black rock over the existing concrete.

The Beaver, Otter and Alcid (former Penguin) exhibits will require minor improvement. The removal of the strip windows in the exterior wall, and extension of the naturalized background to the top of the wall is recommended.

At the Seal exhibit, the concrete surfaces in the tank will be treated to simulate the edges of ice floes.



An exhibition of mammals and birds whose natural habitat is both in and out of the water.

Addition

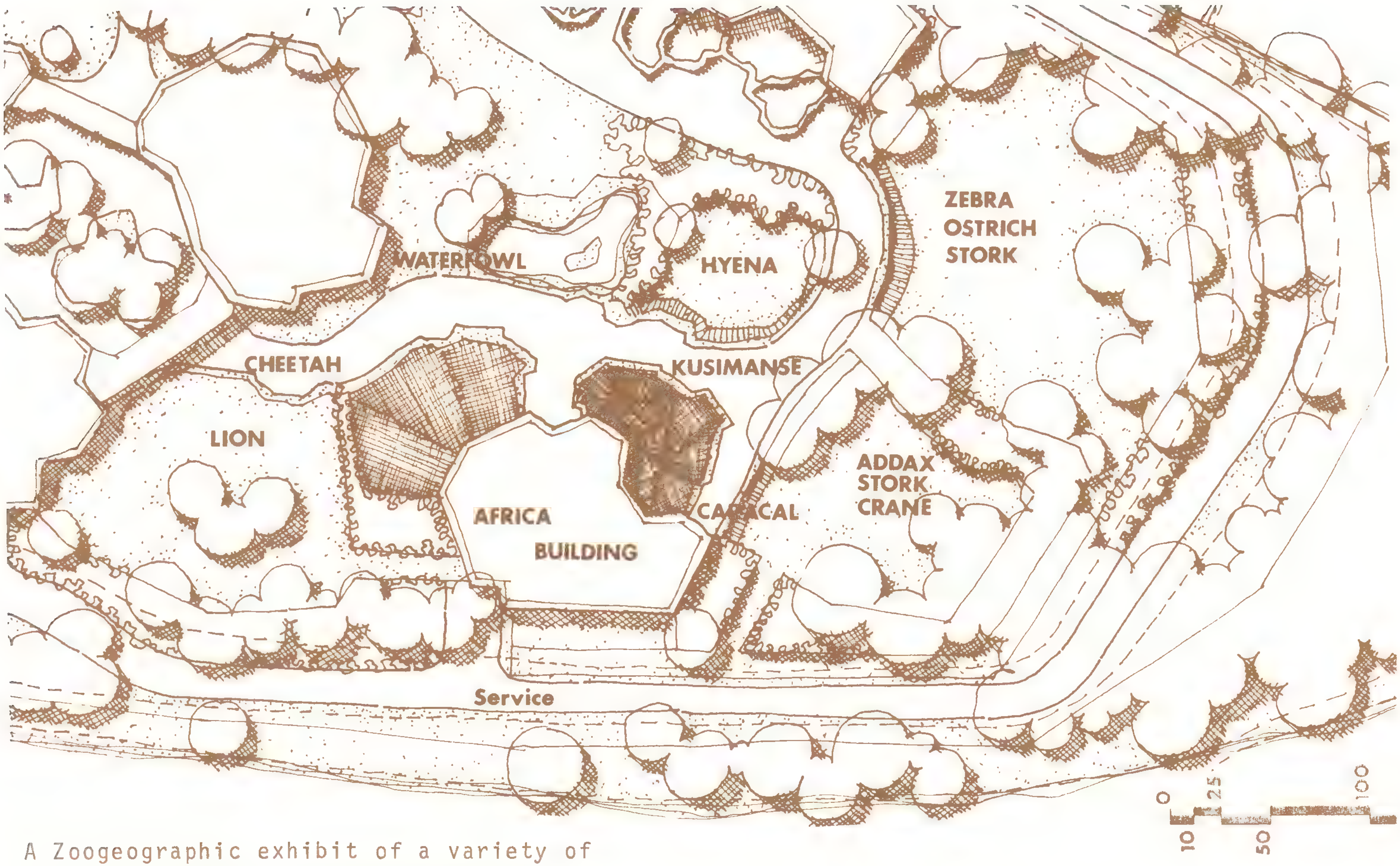
An addition to the existing building will provide for the active California Sea Lions, a Cormorant and Pelican display, and for the King Penguins.

Both indoor and outdoor pools with rocky shore and cliffs will provide a new home for the Sea Lions. A separate pool about fifteen feet across, and with the bottom sloping gently out of the water will make a place for the rearing of pups. The water level relationship to visitor areas will provide for underwater and top of water viewing for the inside pool.

All bird exhibits will also provide for underwater viewing of the diving and swimming behaviour in the water where these specimens are very much at home.

NORTH ENTRANCE
VIVARIUM, NOCTURNAL AND AUSTRALIAN COMPLEXES

AFRICA



A Zoogeographic exhibit of a variety of African animals, in addition to the Pachyderms, Primates and Birds shown elsewhere in the Zoo..

Caracal

Since these smaller African cats with the long pointed ears climb well, their light wire fabric outdoor enclosure will be provided with climbing trees. Dens in the main building will provide limited public viewing.

Addax
Marabou
Cranes

This magnificent antelope, the addax, with its twisted horns will inhabit a naturalized moated paddock along with the storks and cranes. Within the enclosure, a creep area will be provided, and fitted with appropriate nesting areas, for the escape of the birds. Interior spaces will provide for winter viewing.

Hartmann's Mountain Zebra
Ostrich
Saddle Bill Stork

One of the most colorful and interesting of the outdoor yards will surely be this large paddock simulating an African grassland. Back-planted side and rear fences will give access to a runway leading to interior exhibit space and holding areas.

Lion

A spacious grassy enclosure, with trees for shade and rocks for sunning will be separated from the public by a barrier of glass or wire mesh of minimum opacity. Inside, limited public viewing into dens will be available for inclement weather.

Hyena

Where the main pedestrian walk turns toward the Semi-Aquatic building on its way out of Africa, a moated yard, with dens concealed in the screen planting, presents these hungry scavengers with the powerful jaws.

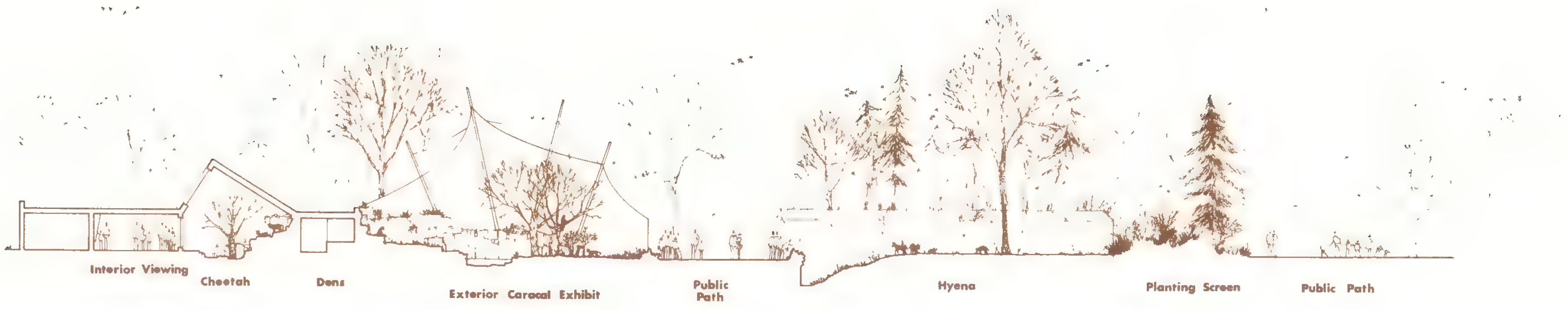
Cheetah

Cheetah

Both outdoor and indoor displays are provided for this lean animal of legendary speed. Outside wire mesh encloses grass and trees, while a similar indoor habitat behind glass will give year-round viewing of this beautiful example of the cat family.

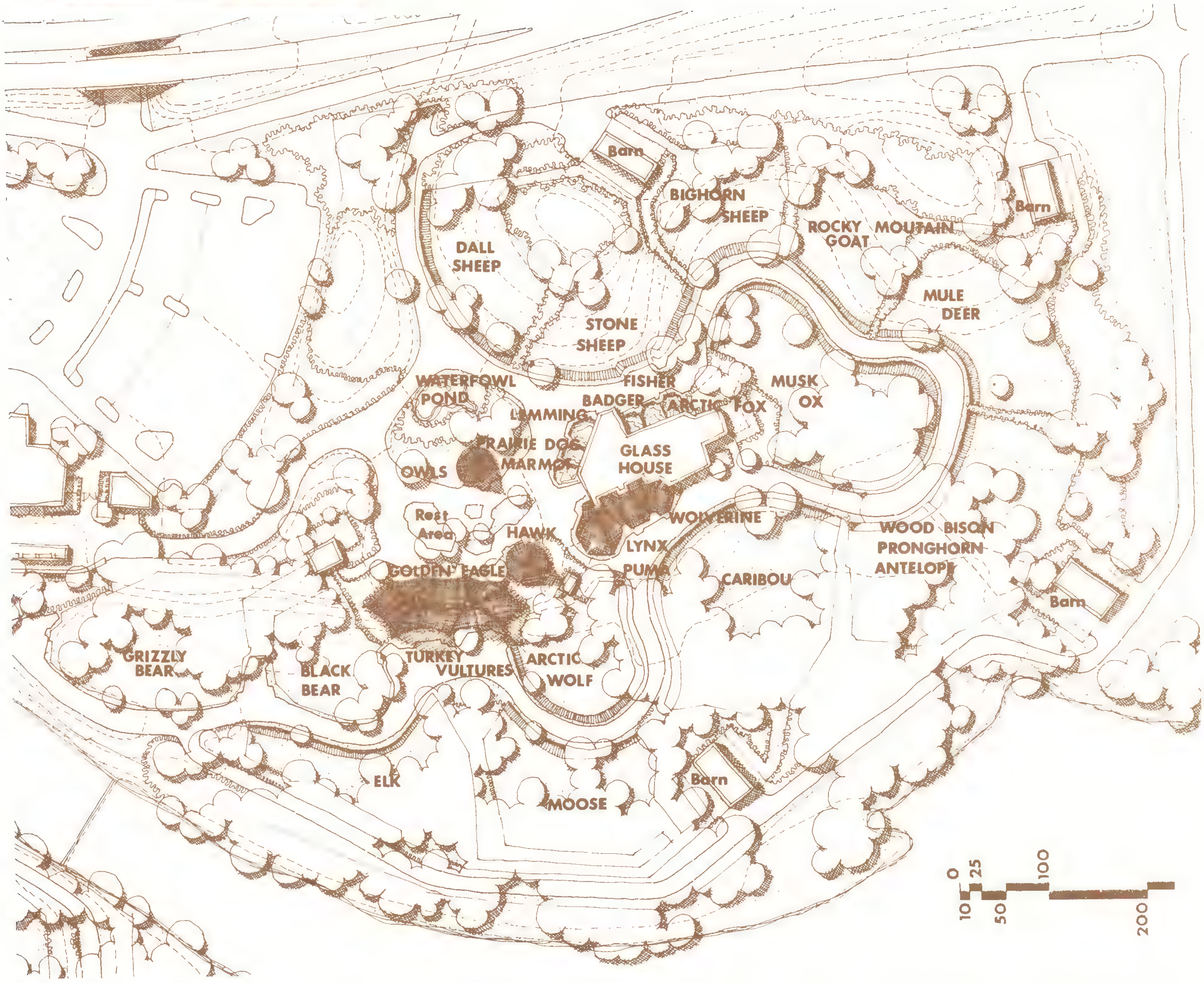
Kusimanse

An open moat or glass enclosure will keep these normally roving relatives of the mongoose at hand for the enjoyment of the visitors.



SITE SECTION AFRICAN COMPLEX

NORTH AMERICA



With the development of this presently under utilized portion of the Zoo grounds, Calgary Zoo's important collection of Northern species will become effectively available to Zoo visitors.

Caribou

The location of this large area, directly opposite the North American Glass House, means that the herd of six females and a male can be seen in comfort during the entire year. At a closer distance from the public path, unobstructed vision across a dry moat will be available with back fences obscured by heavy screen planting. As is typical of all of the North American hoofed stock exhibits, separation from adjacent paddocks is by double fencing with planting between to reduce the possibility of undesirable interaction between the species.

Musk Ox

The public path turns around this centrally located paddock, affording an excellent view of these animals which now exist in the wild only in Canada and Greenland and are rarely seen in Zoos. The inclusion of a bull and six cows in the herd may occasionally make the unique defensive behaviour of this species apparent to the visitor.

Moose

Located close to the river, in an area which will be planted with an abundance of willow and poplar and provided with a marshy pond, are the heavy-antlered moose. Seldom seen in zoos, Calgary's past success with these animals assure a key attraction for the Zoo buff.

Elk

Next to the Moose, and across the public path from the bears, will be a large natural habitat area for the magnificient Elk.

Mule Deer

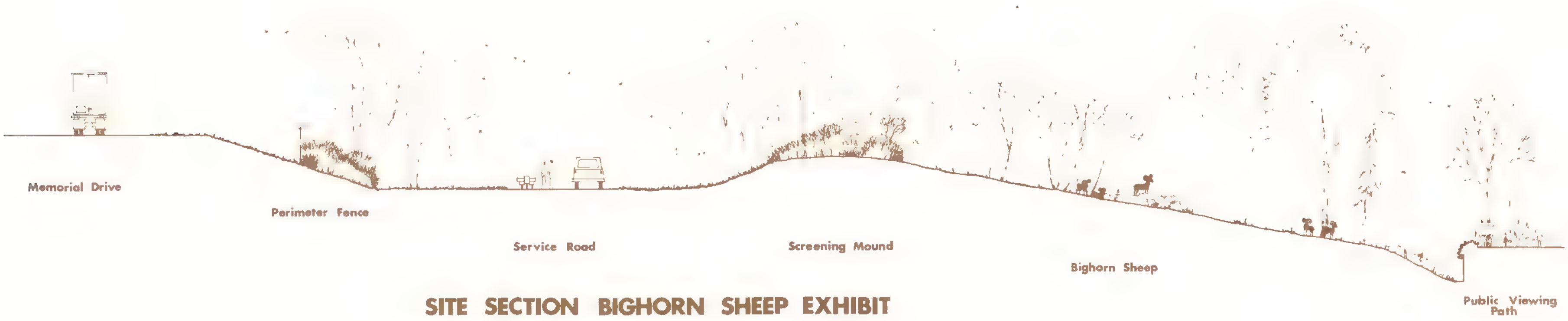
Native to the area, these deer once provided the hides from which the Indians made buckskin.

Sheep and Goats

The Calgary Zoo has a collection of sheep and goats, including Dall sheep, Stone sheep, Bighorn sheep and Rocky Mountain goats that are the envy of zoos everywhere. In their new location they can be properly seen and appreciated by the public. The new hill-sides to be created in this area will screen the highway to the north from the public path, and with the rocky ledges, to be constructed as a part of this development, give the exhibit a natural aspect. Proper use of gates and fencing at the single off-exhibit barn facilities will permit seasonal mixing of the species, display of the lambs and rams, and show various behaviour patterns during the different seasons of the year.

Wood Bison
Pronghorn Antelope

These two natives of the area will be shown together in a common paddock, if possible. In the event that government regulations require isolation of the Wood Bison, the area can be divided, as shown by the dotted lines.



SITE SECTION BIGHORN SHEEP EXHIBIT

Birds

The most spectacular birds to be exhibited in North America are the Golden Eagle and the Turkey Vulture, These great birds of prey will be shown in a free-form enclosure of wire mesh which spans a natural grade change on the site, so that the birds are seen above the viewer on their tree perches from the path below, while from the upper path the visitor will have a more direct view.

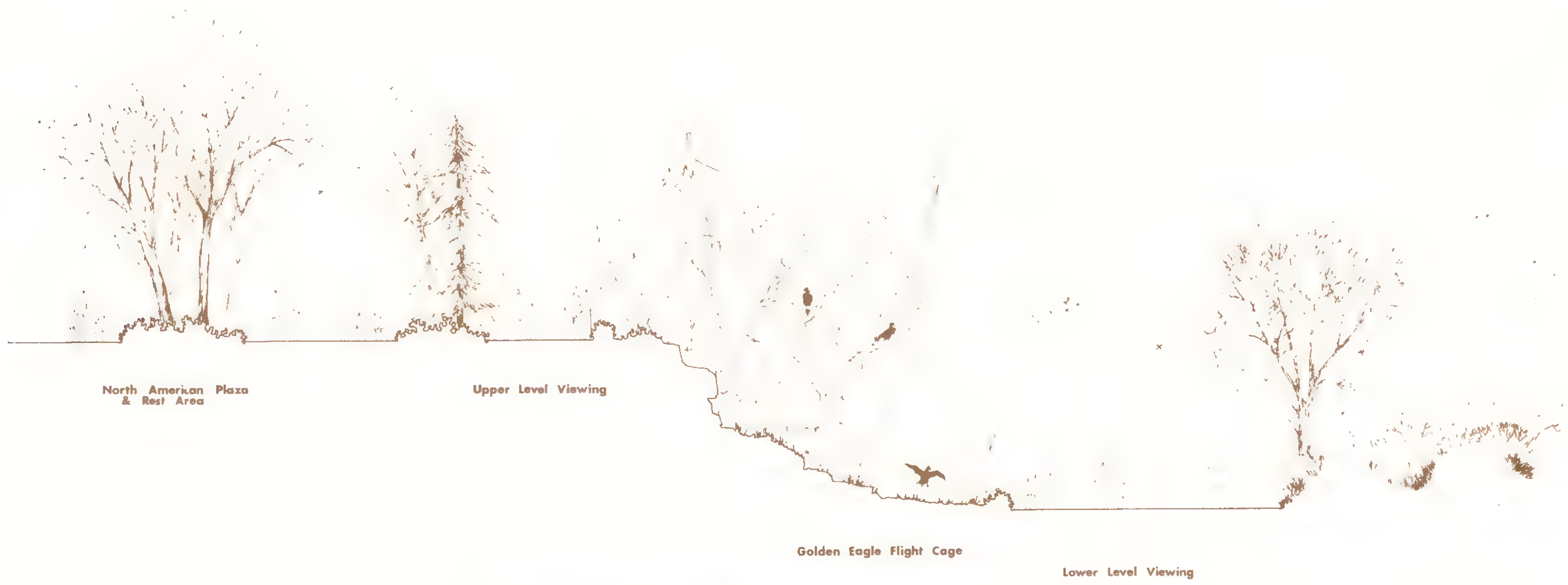
Other enclosures in the vicinity will display key varieties of hawks and owls, while perching birds and songbirds may be seen in the Conservatory and Bird Complex.

Sandhill Cranes are to be exhibited in the various hoofed stock paddocks, where they will have protected escape areas.

As a part of the plateau, a pond will contain representative varieties of Northern waterfowl.

Bears

As the visitor enters North America, he is greeted first by the Grizzly Bears, and then their neighbors, the Black Bears. Through the glass barriers along the visitor path, he will have a clear view of the grass, trees, rocky areas and pool with which these areas will be equipped. This type of barrier will allow a close-up view, and by eliminating feeding by the visitor reduce unnatural begging behaviour which is common in Zoo bear exhibits. The enclosures extend up to den facilities on high ground, as a protection in case of severe flooding.



SITE SECTION GOLDEN EAGLE FLIGHT CAGE

Arctic Wolf and Fox

Sufficient space, enough animals to make a pack, and adequate graphics will reveal to the visitor the social behaviour and organization of the Arctic Wolves.

North of the Glass House, with the Badger and Fisher the Artic Fox will be on display in a naturalized setting, with a burrow giving access to the interior dens.

Fisher

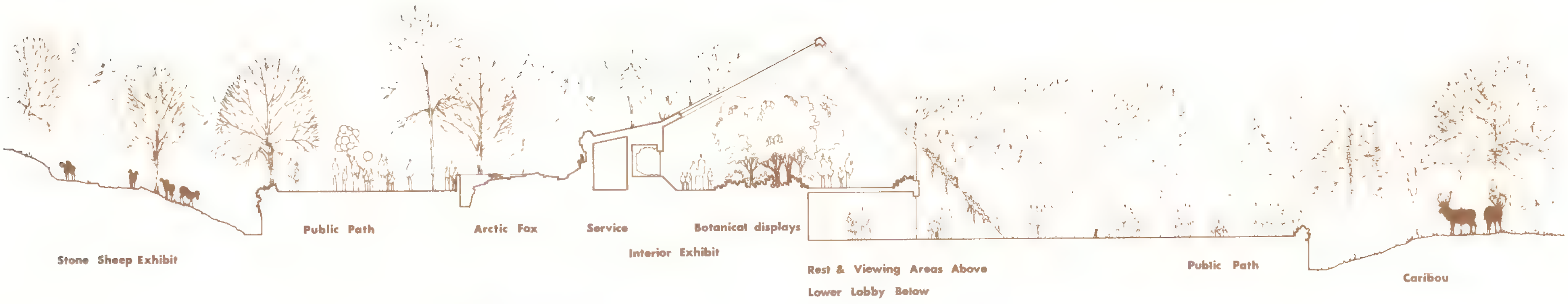
Since he is very good at climbing, the Fisher exhibit will be provided with a climbing tree, as well as rocks, grass and water.

Wolverine

These powerful animals will be at home in an enclosure similar to, and adjacent to the Puma and Lynx.

Cats

The Lynx pair and the pair of Pumas will have wire mesh enclosures against the South side of the Glass House. Grass and trees will blend with the rock ledges built against the wall of the building. Access through the rock ledges will lead to interior dens. From the upper level of the Glass House, the public will have a view down into the enclosure.



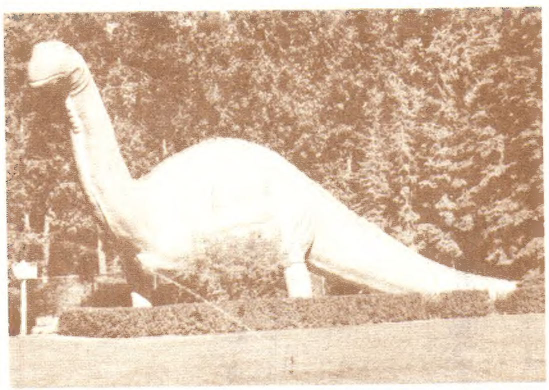
SITE SECTION NORTH AMERICAN GLASS HOUSE

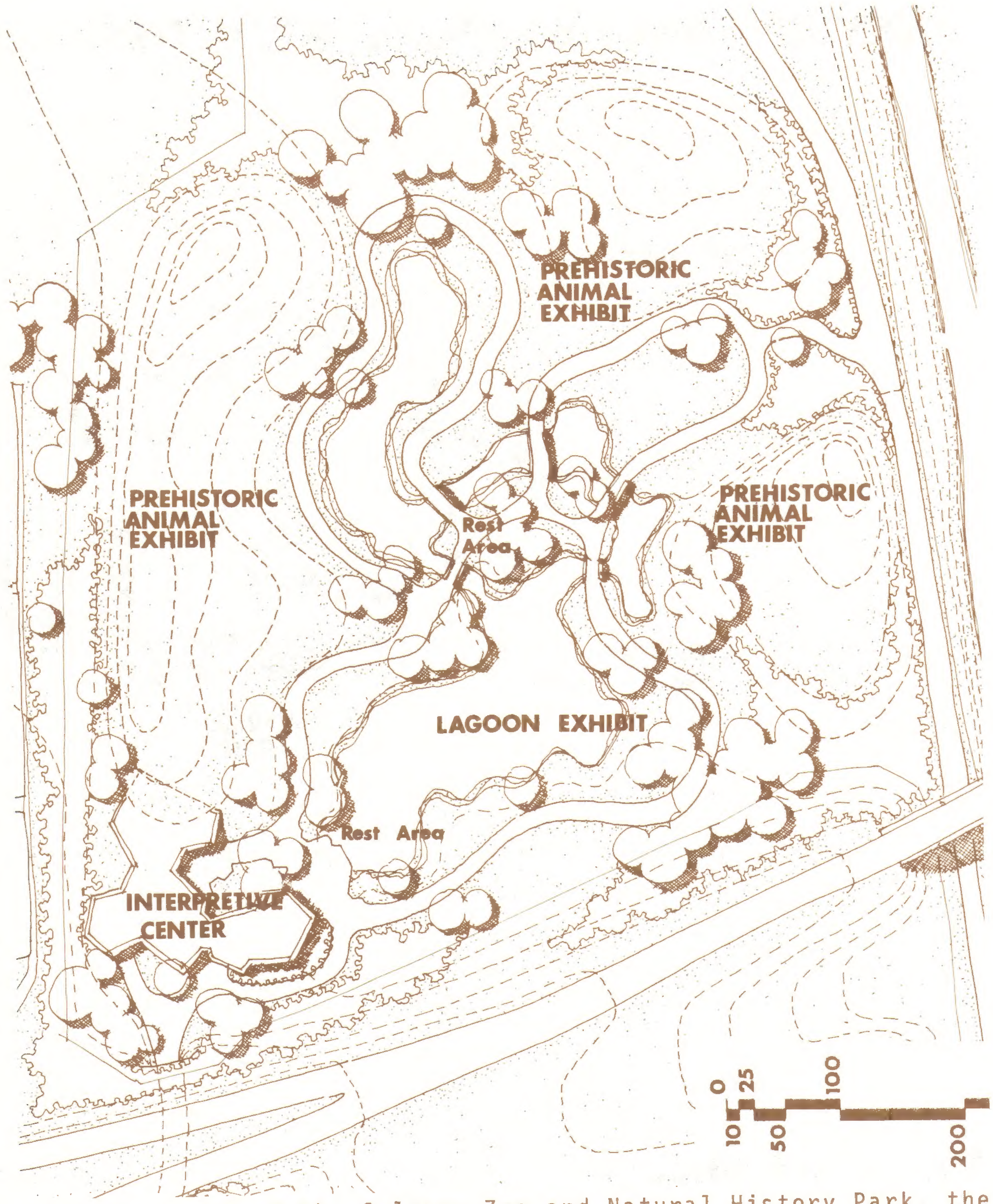
From the upper level of the North American Glass House, the visitor to the Zoo will have a panoramic view of the hoofed stock areas and the Bow River. It will also include a botanical display and satellite food service facilities.

Small Animals

Some of the smaller animals, such as the Badger and the Marmot, Lemming and Prairie Dog colonies will have outdoor enclosures in connection with the Glass House. The Lemmings will also have an exhibit inside the building along with a pair of Packrats or Pika, and Red Squirrels. Exterior exhibits will be open, with dry moats or low walls, while interior exhibits will be glass enclosed with proper lighting to minimize reflections.

PREHISTORIC




PREHISTORIC ANIMAL EXHIBIT
PREHISTORIC ANIMAL EXHIBIT
Rest Area
PREHISTORIC ANIMAL EXHIBIT
LAGOON EXHIBIT
Rest Area
INTERPRETIVE CENTER
0
25
100
10
50
200

Historically an important and well-known part of the Calgary Zoo and Natural History Park, the pre-historic animal display can reach its full potential in this new location.

Although there are some construction problems associated with this area, which was a former landfill trash disposal site, these problems can be technically solved and the site is beautifully situated for exposure to traffic on Memorial Drive and Deerfoot Trail, as well as airplanes approaching and leaving Calgary Airport. This can be an important aid in attracting attendance.

For visitors within the area, the judicious use of earth berms and screen planting will confine attention to the recreated atmosphere of pre-historic ages. The water areas, which are necessary features of that habitat, need be only a few inches deep. Plant materials which approximate those indigenous to the Age of dinosaurs will be planted throughout the park.

Visitors will enter the Complex through a new Interpretive Center containing a Museum showing fossil remains from Alberta, Geological cross-sections illustrating the changes in the earth's crust over the ages, as well as climatic changes which have taken place and affected animal life, vegetation, the formation of petroleum and with proper graphics, what all of this means to us today.

An audio-visual equipped lecture hall will serve organized educational groups in their efforts to make the unrecorded ancient history of Alberta come alive for today's students and interested public.

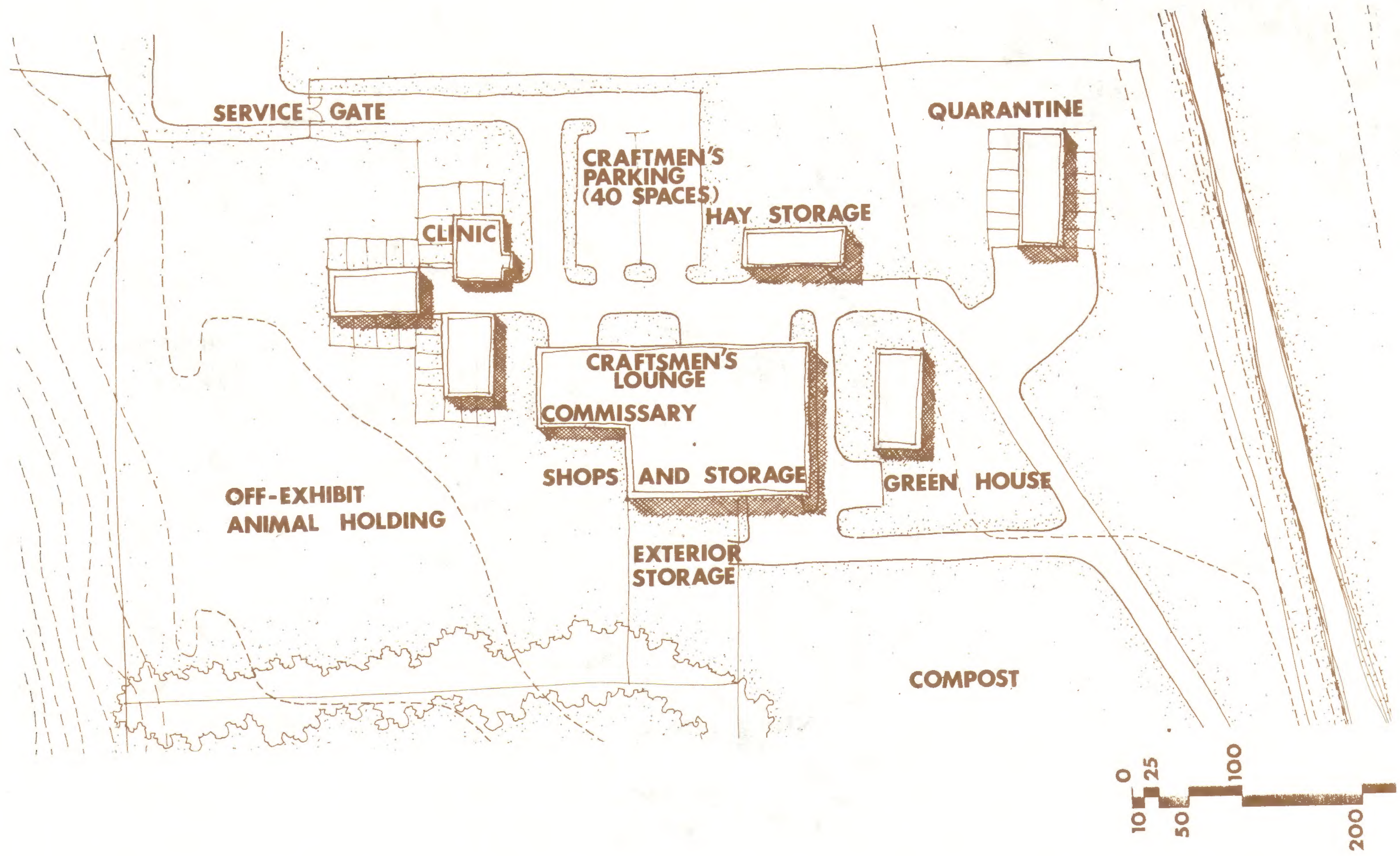
Individuals will be able to take advantage of an automated multi-media orientation center which will, in a short time, take the visitor back through time and prepare him for his trip through the Park with some understanding of what things were like in those days. Surrounded by time-lapse images covering millions of years in perhaps twenty minutes, hearing appropriate sound, and feeling temperature changes as the world changes about him, the visitor can disassociate from today's world.

Throughout the park the models will be arranged and grouped in accordance with the educational story-line, with appropriate graphics to reinforce the orientation experience.

As the visitor leaves the park through the interpretive center, exhibits and another multi-media display will reveal the effect of pre-historic geology, climate and life-forms on the world of today. Animals seen in the Calgary Zoo will be related to their ancestors in the park. And the enormous importance of the oil which formed in those ancient times to Alberta life today will be shown with an explanation of the formation process.

Moving of the existing models from their present location on the East end of St. George's Island will present problems of varying magnitude, depending on the size and present condition of the individual specimens. Some of the older models are in need of extensive repair, and in these cases, where the quality of the modeling warrants, molds could be made and the figures reconstructed in their new location. It is recommended that any dinosaur models not native to North America be excluded from the reconstruction so that a cohesive set of relationships, geographically, can be established for educational purposes.

SERVICE AND SUPPORT FACILITIES



Shops and Storage

Workshops and storage areas for buildings and equipment maintenance and repair; the construction of exhibit artwork and related graphics; central storage for the food service and gift shop operations; and housing for the in-zoo transportation equipment. Approximate space requirements are:

GENERAL MAINTENANCE SHOP	
Storage................	600 S.F.
Work Area.............	2,600 S.F.
Superintendent's Office.............	150 S.F.
EXHIBIT and GRAPHICS SHOP	
Work Area.............	500 S.F.
Materials Storage......	400 S.F.
PAINT SHOP	
Work Area.............	250 S.F.
Materials Storage.......	100 S.F.
GARAGE	
Vehicle Storage........	1,800 S.F.
Light Maintenance......	300 S.F.
Tool Storage & Work Area................	300 S.F.
Gasoline Storage (400 gal.).........	
FOOD SERVICE OPERATIONS	
Storage of Food and Merchandise........	3,000 S.F.
Office.................	150 S.F.
Central Kitchen (Optional).........	1,500 S.F.
TRACKLESS TRAIN	
Storage and Maintenance (May vary with equipment chosen.)...........	3,000 S.F.
Approximate Total	14,650 S.F.

Greenhouse

The many botanical exhibits will require propagation and nurture of new and replacement plant materials as much of this material will not be readily available through local commercial sources. The propagation of plants for sale in the conservatory should also be moved to this location, to restore the conservatory balcony to public use. A greenhouse of about 3,000 S.F. with an attached office for the Horticulturalist and storage space for tools and materials of about 700 S.F. is needed.

Compost

An area for composting of animals wastes from hoofed stock areas, along with plant cuttings and grass from the grounds, will confine any possible diseases to the Zoo grounds and provide material for use in the landscaping. About 8,000 S.F. should suffice.

Commissary

Animal food for the Zoo will be delivered to this point by outside purverors and stored. As preparation and allocation of food for the various exhibits is made, it will be delivered to those exhibits by Zoo vehicles. Approximate areas are:

Food Preparation.........	300 S.F.
Produce Refrigerator.....	250 S.F.
Meat Products Refrigerator..........	200 S.F.
Freezer..................	800 S.F.
Dry Food Storage.........	400 S.F.
Grain Storage............	200 S.F.
*Hay Storage.............	5,000 S.F.
Loading Dock.............	100 S.F.
Structure, Mechanical, etc..................	240 S.F.
Approximate Total	7,490 S.F.

*Provisions will also be made at the various exhibits using hay, to store about a week's supply at that point.

Quarantine

Facilities for newly received animals, remote from other animal areas, where examination for possible disease or parasite infestation may be carried out prior to the animals introduction into the Zoo.
Needed facilities are:

Corrals with Sheltered Stalls - 2 @ 250...	5,000 S.F.
Pens with Shelter & enclosed top - 6 @ 225...........	1,350 S.F.
A room for small cages	400 S.F.
Approximate Total	6,750 S.F.

Clinic

A facility for the care of sick and injured animals, for post-mortem examination of deceased animals, and for the day to day laboratory work necessary to maintain a healthy collection. Facilities to be included, and their approximate areas are as follows:

Treatment Room........	200 S.F.
Necropsy Room.........	300 S.F.
Surgery...............	200 S.F.
Laboratory............	1,000 S.F.
X-Ray.................	150 S.F.
Pharmacy..............	80 S.F.
Office................	80 S.F.
Interior Medical Holding - 2 @ 100..	200 S.F.
Exterior Pens-5 @ 100.	500 S.F.
Corrals with Sheltered Stalls- 2 @ 250 each.......	500 S.F.
Structure, Mechanical & Circulation......	650 S.F.
Approximate Total	3,860 S.F.

Off Exhibit Animal Holding

Off exhibit animal holding requirements result from four sources; animals which for any reason are temporarily unsuitable for display, back-up males for species which may not be readily available when needed and only one male can be kept on exhibit because of conflicts, surplus animals resulting from the breeding program which would overcrowd the exhibit and have not been sold or traded, and animals (such as waterfowl) which are exhibited only in warm weather and need winter quarters.

The use of the west slope of the hill for the maintenance of surplus animals will make these animals accessible to the public if desired, although not within the Zoo proper. This area can be developed as needed, consistent with the success of the breeding programs, and the market for surplus stock.

ACKNOWLEDGEMENT

In addition to the Calgary members of the Charette Team, listed on page 2, who gave invaluable assistance in formulating the objectives which guided the development of this plan and the Executive Committee which met tirelessly and frequently on short notice, Zooplan Associates wishes to acknowledge the assistance of the many Society members, city officials and zoo staff personnel who gave much personal time in preparation and appeared before the Charette Team to give input which could have been obtained in no other manner. In order of their appearance, they are:

Ray Ellard
Active Director
Chairman/Bldg. & Live Exhibits Comm.
Member/Long-Range Planning & Organization

Dr. Merv McArthur
Active Director
Chairman/Botanical Comm.
Member/Executive Comm.
Member/Bldg. & Live Exhibits Comm.
Member/Health of Animals Comm.

Ian Hallady
Active Director
Vice-Chairman (Education)/External Relations Comm.

Mary Ashford
Member/External Relations Comm.

George Pendlebury
Active Director
Chairman/Natural History Comm.

Harry Huish
City Alderman

Chief Brian Sawyer
Active Director
Member/Bldg. & Live Exhibits Comm.
Member/Capital Fund Drive Comm.

Dr. Bill Tatton
Associate Director
Member/Health of Animals Comm.

Stan Hall
Concessioner

Bill Gallelli
Active Director
Member/Bldg. & Live Exhibits Comm.

Rees Taprell
Active Director
Chairman/Capital Fund Drive Comm.

Gordon Shrake
City Alderman

Marmie Hess
Associate Director
Member/External Relations Comm.

Frederick F. Abbott, C.A.
President (Input throughout the Sessions)

Ben Johnson
Active Director
Vice-Chairman (Publicity)/External Relations Comm.
Member/Convention Comm.

Dr. Bim Hopf
Zoo Veterinarian
Member/Health of Animals Comm.

Ron Green
Zoo Staff

Terry McDonald
Zoo Staff

Ralph Leg
Zoo Staff

Jim Love
Active Director
Member/Capital Fund Drive Comm.

Florence Campbell
Executive Secretary

Dr. David Grayston
Active Director
Member/Bldg. & Live Exhibits Comm.
Member/Snack Bar Comm.

Mark Hamill
Zoo Staff (Director of Education)

Dave Banks
Zoo Staff (Records)

Otto Fjellstad
Zoo Staff (Construction Superintendent)

Fred Scott
Active Director
Member/Executive Comm.
Chairman/External Relations Comm.

In addition to his participation in the Charette Team and his constant cooperation, long hours of work, and significant contributions to the development of the plan, we are additionally indebted to Zoo Director Peter Karsten for his permission to reproduce the beautiful animal drawings throughout this book, which are the work of his own talented hand.

Clive Roots joined us for this project because of his special experience with keeping a Zoo through the cold Canadian winters, but his broad general knowledge and imagination involved him in every phase of the work from the establishment of worthy objectives through assistance to the designers in execution of the program and plan. His devotion to the task was greatly appreciated by the Zooplan team.

And then there was Lars Willumsen, whose 48 years of devotion and effort on behalf of the zoo have helped materially to provide the facilities from which this plan projects, and whose early morning meetings with Dr. Schroeder and others of the staff, over breakfast porridge with brown sugar, provided us with the history and background of all that had gone before and many suggestions for the future.